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GOVERNMENT'S ROLE IN ECONOMIC COMPETITIVENESS

HEARINGS

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

PART 2

S. 1233, ECONOMIC COMPETITIVENESS, INTERNATIONAL TRADE, AND TECHNOLOGY DEVELOPMENT ACT OF 1987

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CONTENTS

Opening statements: Page
- Senator Glenn 1, 43
- Senator Roth 6
- Senator Mitchell 7
- Senator Heinz 47

WITNESSES

Monday, June 8, 1987

William Lilley III, president, American Business Conference 3
Clarence J. Brown, Deputy Secretary of Commerce, Department of Commerce; and Ambassador Alan Woods, Deputy U.S. Trade Representative 14
Gary Horlick, former Deputy Assistant Secretary of Commerce for Import Administration 36

Tuesday, June 9, 1987

Robert S. Strauss, former U.S. Trade Representative 45
Robert Noyce, Ph.D., vice chairman, Intel Corp.; Robert Kahn, Ph.D., president, Corporation for National Research Initiatives; Arden Bement, Jr., Ph.D., vice president for technology, TRW, Inc.; and Craig Fields, Ph.D., Defense Advanced Research Projects Agency [DARPA] 60

Alphabetical List of Witnesses

Bement, Arden, Jr., Ph.D.:
- Testimony 60
- Prepared statement 412

Brown, Clarence J.:
- Testimony 14
- Prepared statement 350

Fields, Craig:
- Testimony 60
- Prepared statement 420

Horlick, Gary:
- Testimony 36
- Prepared statement 371

Kahn, Robert, Ph.D.:
- Testimony 60
- Prepared statement 399

Lilley, William, III:
- Testimony 3
- Prepared statement with an attachment 311

Noyce, Robert, Ph.D.:
- Testimony 60
- Prepared statement 387

Strauss, Robert S.:
- Testimony 45
- Prepared statement 376

Woods, Ambassador Alan:
- Testimony 14
- Prepared statement 364

APPENDIX

Page
Text of S. 1233 as introduced 87
Text of S. 1233 as reported 148
Organization charts 307
Prepared statements of witnesses in order of appearance 311
Letters to Senator Glenn from:
    Professor Lewis M. Branscomb, director, Science, Technology and Public Policy Program, Harvard University, June 1, 1987 423
    Robert Herzstein, of Arnold & Porter, June 8, 1987 425
"The Status of Emerging Technologies: An Economic/Technlogical Assessment to the Year 2000," final report, U.S. Department of Commerce 432

GOVERNMENT'S ROLE IN ECONOMIC COMPETITIVENESS

MONDAY, JUNE 8, 1987

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 2:05 p.m., in room SD-342, Dirksen Senate Office Building, Hon. John Glenn (Chairman of the Committee) presiding.

Present: Senators Glenn, Roth, Pryor, and Levin.

OPENING STATEMENT OF CHAIRMAN GLENN

Chairman GLENN. The hearing will be in order.

This afternoon we begin the Committee's sixth hearing on our Nation's trade and competitiveness problems. In today's session and the one which we have scheduled for tomorrow we will focus on proposed legislation I have introduced, S. 1233, the Economic Competitiveness, International Trade, and Technology Development Act of 1987.

There is a growing realization across this Nation that fundamental changes in the structure of the world economy and trading system have undermined the advantages the United States once enjoyed, and that many of the problems of adjustment that we are grappling with are very deep-rooted.

The now-familiar trade statistics tell the story. In the last 6 years, America's balance of trade in manufactured goods has plummeted, from a surplus in 1981 of $18.1 billion to a deficit in 1986 of $151 billion.

Despite the fall of the dollar, the trade deficit for manufactured goods has continued to grow during the first quarter of 1987, rising 5 percent above its level for the same period in 1986.

Even high-tech electronics products have been running a growing negative trade balance since 1984. In 1986 it was $13.1 billion, 49 percent greater than in 1985. There are many reasons for these trade deficits. They include a prolonged period when the dollar was unusually strong, as well as serious fundamental problems that have arisen over a period of time with respect to U.S. industrial competitiveness.

S. 1233, which will serve as the foundation of this Committee's portion of the Senate's omnibus trade bill, addresses one of the sources of our competitiveness problems; the mismatch between the structural organization and function of some of the Federal Government's key agencies and the nature of the global marketplace in which the U.S. competes. I am more convinced than ever that a key to regaining our international competitiveness is to pursue a two-pronged strategy.

First, we need to provide incentives for the judicious development and application of promising advanced technologies, as well as make organizational and functional changes within Government that will help the private sector make these technologies work; and second, we need to strengthen our trade policy making and commercial promotion apparatus.

In this regard, S. 1233, in refining—indeed, transforming—Government's role in the nexus of industrial, technological, and trade concerns goes to the heart of the problem of U.S. competitiveness.

This bill has three main components. First, it reorganizes the Department of Commerce into a new Department of Industry and Technology. The primary mission of the new department will be to enhance American competitiveness by marrying commercial promotion activities, both domestic and international, with technology development and application activities.

The vast bulk of the new department is comprised of offices in the current Department of Commerce, but which are not rationalized in such a way as to eliminate the artificial bifurcation between domestic and international economic activities and to give greater emphasis to technology concerns.

The second component of S. 1233 is the creation of the Advanced Civilian Technology Agency [ACTA], which is a commercial counterpart to DARPA, the Defense Advanced Research Projects Agency, and will be housed in the Department of Industry and Technology. ACTA will provide funding on a cost-sharing basis for high-risk, long-term, high-impact areas of technological development and application that are not otherwise being addressed by the private sector.

ACTA programs will encompass the entire range of technological development and application from idea exploration to prototype development leading to commercialization by industry. I want to make quite clear that unlike proposals for industrial policy, ACTA will not be in the business of substituting decisions by Government bureaucrats for decisions better made by private industry. In short, ACTA will not pick "winners and losers" any more than the Federal Government's other bona fide research agencies such as the National Science Foundation and the National Labs do.

The final part of the bill strengthens the Office of the U.S. Trade Representative and renames it the U.S. Trade Administration. The USTA will retain its "honest broker" status by remaining in the Executive Office of the President and will contain two new offices transferred to it from the Commerce Department: The Office of International Economic Policy, which will give our trade officials direct access to the intelligence capabilities they rely on to carry out their negotiations; and the Office of Trade Administration, which contains trade enforcement functions.

When this office is integrated into the overall trade policymaking apparatus, it will enhance our trade officials' negotiating prowess in the eyes of our competitors. The flip-side of these two transfers is that two-thirds of Commerce's current trade related functions, primarily trade promotion activities, will be housed within the Department of Industry and Technology and thus allow that department to concentrate on exploiting its comparative advantage of enhancing foreign demand for U.S. products and services.

I want to emphasize at the outset that the basis for this legislation is not only the five hearings on trade and competitiveness that the Committee has held already in this Congress, but also the numerous hearings held in previous years, largely under the tireless stewardship of my colleague, Senator Bill Roth, who will be here in a few minutes, I understand.

He has taken the lead in this area in years past and has been, really, a tireless advocate of moving in the direction of trade reorganization. And so the hearings that he held have also provided a background that we draw upon as we start this new set of hearings.

I also want to note that this legislation has been discussed widely with outside parties, including various industry groups and former senior Government officials from both political parties. There is, I am happy to report, considerable support for it. Unfortunately, given our tight time constraint, a number of these persons are unable to testify today or tomorrow, and instead they have been asked to submit letters or statements for the record.

In view of the time pressure, I am very pleased to see that we have been able to assemble such an extraordinary set of witnesses for both days of hearings. Tomorrow we will hear testimony from Robert Strauss, Dr. Robert Noyce, vice chairman of Intel Corp., Dr. Arden Bement, vice president for Technology at TRW, Dr. Craig Fields, Deputy Director of DARPA, Defense Advanced Research Projects Agency, and Dr. Robert Kahn, president of the Corporation for National Research Initiatives.

I want to welcome all of you here today. It is my understanding that Bill Lilley needs to leave by 2:45 and that Deputy Secretary Brown and Ambassador Woods, who will follow Mr. Lilley, need to be somewhere by 4:30. So we will hear from Mr. Horlick as our last witness today.

Our witnesses today, first, will be William Lilley III, president of the American Business Conference. Following him will be the Honorable Clarence J. Brown, Deputy Secretary of Commerce, Department of Commerce. Along with him, Ambassador Alan Woods, Deputy U.S. Trade Representative, and our last witness today, Gary Horlick, former Deputy Assistant Secretary of Commerce for Import Administration.

Mr. Lilley, we are happy to have you with us here today representing that American Business Conference and we look forward to your statement, either in its entirety or an abridged version. In either event, the entire statement will be included in the record.

Welcome to our hearing.

TESTIMONY OF WILLIAM LILLEY III, PRESIDENT, AMERICAN BUSINESS CONFERENCE [1]

Mr. Lilley. Thank you Mr. Chairman. I appreciate the chance to be here.

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[1] See p. 311 for Mr. Lilley's prepared statement.

I appear here today, as you said, on behalf of the members of the American Business Conference. As an organization we have some important credentials on this issue. The Conference itself comprises 100 chief executives of mid-sized high-growth American companies, drawn evenly from the manufacturing, high-tech, service and financial sectors of the economy.

The firms in this organization are standouts: their revenues grow approximately 20 percent per year, their earnings about 30 percent. It is important also to note that the vast majority of these 100 companies compete internationally. Between 1981 and 1985 their average rate of internationally derived sales growth rate was 27 percent. Between 1985 and 1986 alone, their international sales grew at an average rate of 47 percent.

I have included with my testimony a report that we have done, "The Challenge of Global Competitiveness: Views of America's High-Growth Companies." [1] That report documents the tactics and strategies which these companies have used to be successful internationally.

Before turning to the bill at hand, let me state briefly the American Business Conference's views toward the current national dialogue on trade policy. Our executives take it as axiomatic that the answer to our trade dilemma is export expansion. That proposition obviously implies a more internationally competitive American economy.

Our members do not believe that increased competitiveness can be mandated by Government fiat. They regard much of the current debate on trade legislation as counterproductive because it seems to them tinctured by protectionist impulses antithetical to export growth.

The American Business Conference executives place the preponderant responsibility for enhancing our Nation's international competitiveness upon American management, which in creative cooperation with labor, can do more to expand exports than any initiative of Government.

This is not to argue that Government lacks a legitimate role in improving our trade posture. What Government can do and must do is create an economic and regulatory environment in which managerial expertise can flourish. Primarily, this means putting our fiscal house in order.

It also means assuring that the administrative and regulatory structure of Government is dedicated to the maximum extent possible to the encouragement of export expansion and the commercial development and exploitation of new technology.

S. 1233 addresses these imperatives, hence the American Business Conference supports the thrust of S. 1233 for the following reasons.

First, consolidation would presumably eliminate the current illogical separation of trade policy making from trade policy implementation. Functional reorganization will not abolish bureaucratic snarls, but from the perspective of business people who spend more time scouting foreign markets than prowling Washington corridors, it should make matters incrementally more efficient and more comprehensible.

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[1] See p. 318.

Second, the American Business Conference executives hope that creation of USTA would elevate the importance of international trade as a National economic priority. Consolidation would serve to curtail the perceived diffusion of responsibility of trade issues within the Government as a whole.

Obviously, a number of departments and offices will always exert some authority over aspects of trade, but the establishment of a single trade administration should bring a degree of organizational accountability and heighten visibility to the making and implementation of trade policies.

Third, the USTA as envisioned in this bill would have sufficient critical mass and authority to carry on the protracted task of bilateral and, particularly, multilateral trade negotiations. The American Business Conference executives view international negotiations as the single most constructive approach to rectifying inequities in the current trading system.

They believe that the Government requires an institution of sufficient weight and expertise to follow through on trade talks spanning a number of years and a number of shifts in the domestic political tide.

The American Business Conference also believes that the suggested reorganization of the Department of Industry and Technology makes conceptual and functional sense. I am particularly pleased to see that among other duties, S. 1233 assigns to the Secretary of the Department principle responsibility for advising the President in identifying and assessing the consequences of any Government policies which adversely affect or have the potential to adversely affect the competitiveness of United States industries and services.

This responsibility, similar to one assigned to the Council on Wage and Price Stability in the 1970's regarding the assessment of the inflationary impact of Government policies, is championed by the American Business Conference as a necessary precursor to making Government more oriented to exports.

Also intriguing to our members is the proposed creation of ACTA. Establishment of an Advanced Civilian Technology Agency cannot and does not purport to supplant tax and accounting reform or underwrite all research and development projects. But it at least offers the promise of a national effort to promote the capturing of advanced technology for commercial purposes.

Few issues are of greater urgency to America's competitiveness or to the continued health of this Nation's value-added manufacturing and service companies. On that account S. 1233 quite properly stipulates that ACTA's Board will include representatives of mid-sized and small business as well as big business.

I would like to conclude with two points. First, it is a truism that any reorganization, however desirable, can yield improvement only if the people involved are properly motivated to do their best. In particular, that means ensuring that those endowed with overall responsibility are competent and have the support of both the President and Congress. Managerial will and skill are as important in Government as in business. Without them reorganization devolves into mere bureaucratic chess.

Second, Mr. Chairman, I must note that some observers have criticized S. 1233 as hasty legislation. At a time when some in Congress and in the private sector seek passage of a trade bill containing some of the most protectionist proposals in our history, the notion that S. 1233 does not deserve serious consideration and debate mystifies the American Business Conference.

We see S. 1233 as part of a decade-long, bipartisan legislative and regulatory process that has sought to rationalize the Government's various trade functions. Senator Roth, as you noted earlier, has provided much of the leadership for this effort. Four years ago, for example, the American Business Conference warmly supported Senator Roth's and Secretary of Commerce Baldrige's plans for trade reorganization, plans in many respects similar to the one outlined in the legislation you are considering today.

It is quite unimportant to us who receives the credit for trade organization. The important thing is to get the job done. At the same time, I want to make my organization's position clear. As much as the American Business Conference would like to see reorganization carried out, if S. 1233 is tied to an omnibus bill that contains seriously protectionist measures, we shall not be able to support it.

The enhancement of exports and the nurturing of competitiveness we see as incompatible with protectionism.

We congratulate this Committee for its longstanding commitment to building an internationally competitive America and we look forward to working with you in developing trade legislation designed to encourage business success rather than protect failure.

Thank you.

Chairman Glenn. Thank you, Mr. Lilley. I am glad you mentioned Senator Roth's efforts in the past. I mentioned those myself during my opening statement here.

Bill has been working on this for a decade. And, as I mentioned, while we have had several hearings scheduled, we draw on a great deal of background that he developed through the years. We draw on far more than just the hearings that we will have this week, and it is due to Bill's dedication to this and his continuing effort through the years that we are able to do so.

Bill, I will call on you for any opening remarks you wish to make before we get to questions here.

OPENING STATEMENT OF SENATOR ROTH

Senator Roth. Thank you, Mr. Chairman. I sound like "Gravel Gertie" but I will speak the best I can.

Let me start out by saying that I do greatly appreciate holding these hearings on trade and competitiveness. I think these are probably the most critical problems faced by this Nation. And let me say, Mr. Lilley, I agree with you that I do not care who gets the credit, but I do think that it is critically important that we restructure the Executive Branch of the Government to make trade a top national goal and put some muscle in it to back those policy decisions.

I have, at various times, to be candid, supported beefing up the USTR, and of course, more recently we had the Department of International Trade and Industry proposal. I think there is some merit in the latter because I think it would give the kind of depth of analysis and background that is critically important to enable the trade people to speak with some strength when they are dealing with the State Department, the Treasury and some of the others.

So for that reason, Mr. Chairman, I am very sympathetic with many of the proposals contained in your legislation. I think it is important that we put together much of the trade policy process that is in the U.S. Trade Representative and the Commerce Department.

I have some concern that by putting it into the Executive Office of the President that we will run into difficulty. I can say from past experience, not only under this Administration, but the Carter Administration, there is always great concern as to how much you are expanding the White House office staff, so that I think we will run into some very stiff resistance from that point of view.

My other concerns relate to the manner in which the proposal reconfigures our trade function. In my view the legislation is only a portion of the consolidation of trade functions on which we should set our sights. The important data collection aspects for trade policy are left in Commerce. I have already indicated that if I had my "druthers," I would like to see the creation of a Department of International Trade and Industry.

But if we cannot have that, I think it is important we move on with the job in the direction of consolidation. So from that standpoint, Mr. Chairman, I congratulate you.

I am sorry I was not here at the beginning, but I was trying to get my voice cleared up. I also appreciate your comments that you are not interested in industrial policy. I think we share that same concern, and I think that properly drafted, the ideas you have there are something worth studying very carefully.

I have to say, however, that as one who thinks one of the most important things we can do is to reduce the deficit, I have real reservations about beginning new spending programs, so that I will want to take a hard look at that.

But I think these hearings are a further step in the right direction and I want to congratulate you.

Chairman GLENN. Thank you very much, Senator Roth.

Senator Pryor, any opening statement?

Senator PRYOR. At this time I have no opening statement, Mr. Chairman.

Chairman GLENN. All right, fine.

Senator Mitchell, who could not attend the hearing, has a statement that will be inserted into the record at this time.

[The statement referred to follows:]

OPENING STATEMENT OF SENATOR MITCHELL

Today's hearing on S. 1233 marks the culmination of an extensive series of hearing which the Governmental Affairs Committee has held on trade and competitiveness.

Restoring America's international competitiveness requires strengthening the Federal Government's trade policy-making structure; and also, reinforcing research and development of advanced technology on which the nation's competitive edge ultimately depends.

In earlier hearings, the Committee heard general testimony in support of strengthening our policy-making structure. It also heard testimony of the need for coordinated research and development.

Support existed for at least some form of government reorganization. S. 1233 fills in the details. It seeks to ensure that international trade and technological competitiveness will exist as a sustained, concentrated, high priority of government.

First, the legislation will reorganize the Department of Commerce into a Department of Industry and Technology. It will join technology development assistance with both domestic and international commercial promotion activities. A new Advanced Civilian Technology Agency (ACTA) will work with industry groups to stimulate development of new technologies for commercial applications.

Second, the legislation seeks to strengthen the Office of the U.S. Trade Representative—by transferring to it authority over the Commerce Department's Offices of Trade Administration and International Economic Policy, within a new U.S. Trade Administration.

The legislation seeks to focus and solidify the thrust of all the various initiatives which will be used to restore the nation's competitive position.

I congratulate Senator Glenn for his leadership in designing this proposal. I look forward to its refinement by the full Committee.

Chairman GLENN. Mr. Lilley, one of the significant reasons for the Japanese success in developing and commercializing new products and processes is that they can build a consensus through organizations, primarily ones like MITI, to take the lead for the government and for the Japanese industry at the same time.

In our country, however, responsibility and decisionmaking authority for innovation and technology development is scattered between numerous departments and agencies, including the Department of Commerce, Department of Justice, Department of Labor, Department of Defense, the National Science Foundation, the Department of Agriculture, the Office of Science and Technology Policy, and others.

Now, that is a very diffused approach which has led to policies which sometimes are at cross purposes or which have had negative effects. Would the reorganization of Commerce as proposed in S. 1233, in your opinion, which would provide the Department of Industry and Technology with lead agency responsibility for technology development—which you commented on briefly in your opening remarks, help to build consensus between industry and universities and the Federal Government?

Mr. LILLEY. I think, as you said, Mr. Chairman, and Senator Roth said, also, that the need is absolutely imperative for our economy and for our society that we become much more trade conscious, and more export conscious. I think the current structure of our Federal Government reflects an economy which had grown comfortable with the domination of a domestic market which is the largest marketplace in the world, and we never had an economic and social imperative to become export conscious.

Those times have changed, and the statistics you cited in your opening statement show that they have changed to our detriment and there has to be a corresponding shift made in the structure of our Government to dedicate this Government to try to help all parts of the economy and society, educational as well, focus on this need to become more internationally competitive. It just has to be done.

Chairman GLENN. Your organization, more than any other business organization I know of, has concentrated their efforts on technological innovation. In fact, most of your members are those who have grasped some new technology or some result of research and taken that and run with it in the free domestic and international marketplace, which has been responsible for the tremendous expansion of the companies that you represent. You represent a very interesting grouping of businesses, more so than about any other business group I know of.

Did you happen to see a couple of articles in last week's Wall Street Journal on Tuesday and Wednesday on how the Japanese are reacting to some of the new R&D, and how they are organizing for the future?

Mr. LILLEY. Yes, sir, I did.

Chairman GLENN. I thought these were very good. They show an ability to organize that goes beyond anything that we can do in this country right now, and that is one of the things we are trying to address with this legislation, and so we appreciate your support for it.

You are well aware, also, that the United States is now a truly internationalized economy. Do you feel that it makes sense to establish one Under Secretary for Industry in the Commerce Department who will have the lead responsibility for integrating domestic economic affairs with international economic affairs; in other words, combining the two?

Mr. LILLEY. Yes, sir. That seems reasonable.

Chairman GLENN. The Secretary of Commerce is charged with the administration of U.S. export controls while simultaneously charged with the operation of programs for export promotion. Some people have claimed that the Secretary's responsibility to promote U.S. commercial interest impairs his ability to protect U.S. national security and foreign policy interests.

S. 1233 would separate export promotion functions from export control functions and eliminate this conflict. Do you see that as a good move? What would be your views on that?

Mr. LILLEY. Mr. Chairman, that is a tough question. A number of the growth companies in our economy have had serious trouble with the old export controls program and whether it is a question of how it is administered or whatever, it is a problem, and I think Congress is recognizing that now.

We have supported in the past the proposal that Senator Roth made a minute ago that all of these functions should be consolidated. Our reasoning there was that the greater critical mass you had, the more success you would have. On the other hand, we would defer to whatever the Committee thought was the most that you could get done at any one time, realizing that you cannot do everything one year or the next year. We have no hard answers on that, and as I say, the export controls issues are so fraught with so many problems it is difficult to tell if those problems result because it is ostensibly lodged in the Department of Commerce.

Chairman GLENN. How much do antitrust impediments hurt joint R&D activities for your member companies? Do they try and work together, and have they gotten into antitrust problems because of that?

Mr. LILLEY. Mr. Chairman, I think while that issue is very important to big scale business, in the American Business Conference you can join as long as your revenues are under $1 billion and you can stay in as long as they are under $2 billion. Then you have to leave. Our average size is $400 million.

Chairman GLENN. What was the last?

Mr. LILLEY. $400 million revenues is the average size company.

Chairman GLENN. What do you have to qualify at the lower end to get in?

Mr. LILLEY. $25 million. One of the hallmarks of our success internationally has been the intense desire by the CEOs to continue to run their international operations in an entrepreneurial hands-on fashion. And they have chosen again and again and again to avoid any kind of a joint venture structure unless absolutely dictated by foreign domestic content type regulation on the grounds that agility, speed and aggressiveness are so important, internationally.

Also, they are not of a scale and size that they are on the radar screens for antitrust types of problems that very large companies are under, so the antitrust exclusion there to them, I must say, is not imperative, and if they had the chance, they always greatly favor to manage their own destiny.

Chairman GLENN. Do many of your firms have active research programs of a long-term nature, or are they mainly entrepreneurs who take other research and run with it?

Mr. LILLEY. No, sir. Our companies are scattered evenly across—we have about 25 basic manufacturing companies, about 25 high-tech manufacturing, and about 50 service companies. So they are not primarily high-tech or primarily any one type. They do a disproportionately larger per share per worker emphasis on R&D than the Forbes 100 or the Fortune 100. Their R&D spending increases about 30 percent annually. Just as their revenues and their earnings grow, they are very intent on growing their R&D. They are very R&D conscious.

But these are all value-added high-wage, high-quality companies so that would tend to be typical, or should be typical.

Chairman GLENN. Thank you very much.

Senator Roth?

Senator ROTH. Mr. Lilley, I often find when I propose reorganization of the trade function, that some of my colleagues say it really does not make any difference, the organization is not paramount in trying to meet the problem of international competitiveness; would you agree with that statement?

Mr. LILLEY. No, sir. I would not.

Senator ROTH. As a businessman and one experienced in organization, why is it important? How would you answer these charges that this is irrelevant?

Mr. LILLEY. I think it goes back to Chairman Glenn's opening statement and your opening statement that it is almost tautological that if the Government is structured in such a way that this is not an important aspect, then it ends up not being an important aspect. And, frankly, in this country, we have resisted the need to become export and internationally conscious.

You have been one of the people for ten years who has been saying that we have to change that attitude. The problem we are in now is that exports have been flat since 1981 while imports have continued to grow, and that is the bind we are in. Just as business has to change and become more internationally oriented, the Government has to change.

For people to tell you it is not important, it is like a businessman telling you that an international market is not important.

Senator ROTH. I find it is usually the lawyers who say it is not important, and most law firms are managed like organization was not important.

As I mentioned earlier, I am somewhat concerned that the White House—I do not care who is in control of it—will be concerned about adding a number of people to the staff, so that it was might thought we might considering proposing the creation of a new U.S. Trade Administration as a free-standing agency outside of the White House and outside of the Chairman's Department of Industry and Technology.

This USTA would be comprised of the Office of the U.S. Trade Representative, except for its policy coordination responsibility, which would continue to reside in the White House. Within the USTA there also would be placed the functions of the International Trade Administration, including international economic policy, trade adminstration, trade development, and the U.S. and foreign commercial service.

The U.S. Trade Representative would remain in the White House to lead the interagency policy coordination process but would have direct authority over the USTA. We thought perhaps this approach would satisfy the desire to retain a direct White House presence on trade matters—the key advisor with access to the President—but it also addresses the clear need to provide the staff support so much needed by our trade negotiators today.

I wonder if you would care to comment on that as a possible approach?

Mr. LILLEY. Senator, we would defer to the Committee as being more expert in what is the best political and structural sense of how large or not large the Executive Office of the President should be.

I remember in the 1970's when we had two successive crises which I think were of similar magnitude to the problem we have now with international competitiveness, first with energy and then with inflation, that the Congress did establish in the Executive Office of the President first the energy office, and then the Council on Wage and Price Stability, and before that the Cost of Living Council.

I ran one of those, the Council on Wage and Price Stability. When you work in one of those Presidential agencies, you do not have a sense that you are in any place different than being in a Secretary-led agency versus a Presidentially-led agency. So I do not know if it changes the work habits of the people in them.

We will have to defer to your greater expertise as to is there a question of scale in terms of the Executive Office of the President per se. So I cannot give you a good answer to that, except having worked in one of those, I do not think it impeded success in that agency.

On the question of putting the counselor services with the other trade functions, this organization has in the past supported that proposal. We believe, as I said earlier, the larger the critical mass, hopefully the greater the focus there will be. Again, we would leave it to you as to what particular box you would put it in. Our interest is to have trade and competitiveness upgraded substantially and consolidated and made more comprehensible to the businessman who is dealing with the entity.

Senator ROTH. Thank you, Mr. Lilley, and thank you, Mr. Chairman.

Chairman GLENN. Thank you.

Senator Pryor?

Senator PRYOR. Mr. Lilley, first I would like to just in a personal note say how much I appreciate your organization. I have met with your organization a time or two before, and I am extremely impressed with its energy, creativity, and willingness to take risks. I want to compliment your fine organization.

Mr. Lilley, in the last paragraph of your statement you say that, "as much as ABC," your organization, "would like to see reorganization effected, if S. 1233 is added to an omnibus trade bill that contains protectionist measures, we shall not be able to support it."

First, I am not going to ask you to define or give us your concept of a protectionist measure. Thus far we have the Senate Finance bill, and I assume that you are somewhat familiar with that bill. Do you consider the bill as reported by the Senate Finance Committee to be protectionist?

Mr. LILLEY. Senator, I do not want to sound evasive and now I will sound evasive. I have not had the chance to—I followed the markup and I saw the reports in all the trade sheets the next day—but I do not think anyone has had a chance to really read and see what is in that bill. I have heard different interpretations of it.

The American Business Conference companies do extremely well abroad and they are appropriately worried about any kind of legislation which will trigger retaliatory strikes abroad because it is their companies that are taken hostage. They are the people abroad. There is no way that our organization could support the House-passed bill.

Senator PRYOR. That was going to be my second question. Is the House bill protectionist in your best judgment?

Mr. LILLEY. I would regard the so-called Gephardt amendment as protectionist. I would regard the private right of action on dumping and the proviso that adds component parts of finished products in the dumped product category—there is a technical name for it but it escapes me now—as protectionist, and I would call protectionist the new definition of what a natural resource subsidy is. Those four provisos we would regard as protectionist.

Senator PRYOR. Well, Senator Roth and I sit on the Finance Committee——

Mr. LILLEY. Yes, sir. I am aware of that.

Senator PRYOR [continuing]. And we—especially Senator Roth—was a major contributor to that bill, and I think I can speak for most of those members on that Committee in hoping that we would not in fact draft a protectionist bill. We have tried to steer away from protectionism. I hope that would be the case, and I hope that our colleagues will look at that to be the case.

Mr. LILLEY. Senator, if I could just—you and I talked one morning at breakfast that one of our larger concerns is almost a philosophical or cultural concern in that the more the legislative effort goes on, there is a growing perception that our competitiveness problem begins and ends with these unfair Government-imposed barriers.

Our companies, who are very successful abroad, would show by their international success that not to be the case and we believe quite strongly that if all of those barriers were removed tomorrow and United States companies got all the business—which is unlikely—the most you would reduce our trade deficit is by perhaps 15 percent. We are concerned that a law will pass and people will expect something miraculous to happen and something very modest will happen and we are worried about the backwash, not the bow wave.

Senator PRYOR. Mr. Lilley, one final question. Talking about the Finance Committee marking up and working through that trade bill, I thought it was a pretty miraculous thing the way the bill finally came together. I thought it was going to take months. In fact, I did not know if we could put a bill together, and all of a sudden we were voting on its final passage. It was kind of like giving a war and no one came.

I thought it was an extremely good job of bipartisanship. One of our chief witnesses on several occasions was Ambassador Alan Woods, our Deputy U.S. Trade Representative, who is going to be coming on the panel very soon after you.

Mr. LILLEY. Senator, if I could, just one of the reasons that we support this proposal is that so much of the trade bill from Ways and Means and from Finance deals almost exclusively with the question of imports, as if that is the beginning and end of the problem and there has been no discussion of exports.

The only way we are going to get out of this situation is to increase exports, and our interest in this bill before the Committee today is that it is the first effort to inject the export part of the calculus into the overall equation, and that is why we are interested.

Senator PRYOR. Well, I am glad you mentioned that because it is exports that my question relates to. Ambassador Woods points out in his statement that is before the Committee now and that he will be giving orally, that if Commerce and USTR functions are consolidated, that 98 percent of USTA's focus would be on the industrial sector. I guess that means that about 2 percent would be left over for the agricultural sector, and I wonder if you might have a comment on that, if you had an opportunity to look at that statement or to really focus on how much of USTA's effort would be concentrated on one sector vis-a-vis another sector?

Mr. LILLEY. I have not had a chance to see the statement.

Senator PRYOR. All right. I thank you very much.

Chairman Glenn. Thank you, Mr. Lilley, very much.

Bill, do you have any further questions?

Senator Roth. No further questions.

Chairman Glenn. Thank you very much, Mr. Lilley.

Mr. Lilley. Thank you.

Chairman Glenn. We appreciate it. We may wish to have additional questions as other members review your testimony this morning, and we would appreciate your response to those so that they could be included in the record.

Thank you very much.

Our next panel will consist of the Honorable Clarence J. Brown, Deputy Secretary of Commerce, Department of Commerce; and Ambassador Alan Woods, Deputy U.S. Trade Representative.

Gentlemen, it is a pleasure to have you with us. We know Clarence J. Brown better in Ohio as Bud Brown, formerly of our congressional delegation before he moved over to Commerce. It is a pleasure to welcome him as a friend of long standing here, and Ambassador Woods, too.

Mr. Brown, we look forward to your testimony, either in its complete version or a summarized version. In any event, the entire statement will be included in the record.

TESTIMONY OF CLARENCE J. BROWN, DEPUTY SECRETARY OF COMMERCE, DEPARTMENT OF COMMERCE;[1] AND AMBASSADOR ALAN WOODS, DEPUTY U.S. TRADE REPRESENTATIVE[2]

Mr. Brown. Mr. Chairman, I am pleased to have the opportunity to appear before this Committee to discuss S. 1233, and I will give the testimony pretty much as you have it before you.

I want to talk first about the bill's provisions reorganizing the science functions of the Department of Commerce.

The United States currently spends about $15 billion each year on basic research, of which about $11 billion is Federally funded. This is about 10 times more than any other Nation has the in-place academic capability to do, and represents a decisive competitive advantage for the United States. Moreover, funding basic research is both an appropriate and necessary Governmental function.

However, if we have a technology competitiveness problem, it appears to stem not from lack of creativity, but from our apparent difficulty of translating the results of Federally funded research into commercial products and processes for the benefit of the private sector.

Specific barriers to translation currently exist. They include a number of things; among them, the high cost of capital, the liability laws in the United States, our process patent laws, and the need to modify section 7 of the Clayton Act so as not to discourage pro-competitive mergers. It is such barriers and not the Commerce Department or the U.S. Government organizational barriers that affect U.S. technology competitiveness.

In fact, I believe it is the quality of people and not the arrangement of boxes that determines how well the Government functions. For example, the Secretary of Commerce and Ambassador Yeutter have an excellent working relationship that permits the closest possible cooperation between our two agencies. Importantly, this relationship exists not just at the top. At the staff level and up we provide support for USTR's international negotiations and other trade policy activities.

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[1] See p. 350 for Mr. Brown's prepared statement.

[2] See p. 364 for Mr. Woods' prepared statement.

Similarly, the Department works well together on an intra-agency level. For example, we are now engaged in a series of cross-cutting discussions within the Department of Commerce on a variety of topics, such as emerging technologies and superconductivity, which takes advantage of agency-wide interest and expertise.

Moreover, reorganizations, I think, have the potential to create unneeded mischief. I served for the 17 years that I was in Congress on the Government Operations Committee of the House where reorganization was one of our major responsibilities.

Under S. 1233, Census is no longer combined with other parts of economic affairs. Right now the Department collects, disseminates and analyzes data not only for economic policy purposes, but for statistical reasons far beyond general technology. For example, Census and Economic Affairs gather economic statistics that are needed by ITA to enhance the promotion and better the policy-making decisions in the arena of international trade. We are the largest statistical body in the Government, and that should not be changed by having them separated from each other in the Department of Commerce.

One example of a product that we produce in the Department of Commerce is the annual U.S. Industrial Outlook, which gives the domestic prospects for more than 350 industries. This is put out by the International Trade Administration, but it uses data gathered by the Census Bureau for that purpose, and it is one of the most popular documents that the Commerce Department produces.

I cannot support the establishment of the new Advanced Civilian Technology Administration. We do not need this new program which carries a price tag of $480 million over the next 3 years and would duplicate functions that are either being handled by other Executive Branch agencies or are best left to the States and the private sector where considerable progress is being made for the same purpose.

In many industries, the research and development necessary to remain competitive has become increasingly costly and risky. Establishing ACTA is not the solution, however. There are other ways to address this problem that are low-cost but highly effective. For example, the National Cooperative Research Act removes many antitrust concerns from joint R&D activity. The Act is being used by industries to pool their risks in highly speculative ventures, with no Government interference. Sixty-one ventures have been formed and are being operated under the Act, and that has been true in the last 3 years.

The President, in his competitiveness initiative announced last January, proposed a number of other steps we should take that do not involve great expenditures of money or making organizational rearrangements. His proposals include establishing university-based science and technology centers to perform long-term research in such areas as robotics, materials-processing and biotechnology; a technology share program involving joint research with consortia of U.S. firms and universities; administrative steps to encourage and increase Federal technology transfers; reevaluating several aspects of the Government's commitment to the R&D tax credit; accelerating spin-offs of defense-driven technologies; and reforming of our intellectual property laws to provide adequate protection for new ideas, products and services.

In addition, this Administration's economic recovery program and tax policies have stimulated great increases in productivity and generated enormous activity at the State level. There is at least $700 million of activity in 43 States devoted to increasing productivity, technology, and innovation.

With respect to trade reorganization: As Secretary Baldrige stated to the Committee in March, the Administration does not have a position on the general issue of trade reorganization at this point, but I can make a few personal observations about the particular proposals embodied in S. 1233.

The premise underlying many trade reorganization proposals is that the Government's trade functions are dispersed among too many Government agencies and they should be consolidated or better coordinated.

S. 1233 would, in my view, take a big step backward in this regard. It separates one half of the International Trade Administration—that is, the Trade Administration Agency and international economic policy—from the other half—trade development and foreign commercial service.

This would disperse operational trade functions, instead of combining them, and it would seriously erode the ability of each of these units to do its job. For example, ITA/Trade Administration's export-licensing, and evaluations of draft antidumping and countervailing duty petitions, rely heavily on country-specific commercial information available through ITA and International Economic Policy sections and the US&FCS.

Our MOSS talks with Japan—Market Oriented Sector Specific discussions—in which the Department played a major role, could not have been as effective as they were without sectoral input from ITA/Trade Development, the country-specific expertise of ITA/International Economic Policy's Japan office, and assistance from US & Foreign Commercial Service's Tokyo office.

In the case of U.S. foreign policy controls on oil and gas equipment to the USSR, for example, trade development, which has the sectoral expertise in the field of oil and gas equipment, provided Trade Administration with such positive evidence of such widespread foreign availability as to render the controls ineffective. That factor was critical to the Administration's decision to let the oil and gas controls expire.

That is just an example, and I think the bill overlooks the contributions that each of these units makes to the development and implementation of our national trade policy and, in fact, would deprive them of the interactive support they need in order to be effective. Cutting ITA in half would be a big mistake.

Mr. Chairman, I want also to address briefly the proposals advanced by Senator Bingaman for inclusion in the bill. We cannot support them. More advisory bodies are not needed. The President has at his disposal a vast array of information and advice concerning U.S. competitiveness. There exist literally dozens of Nationally based groups and committees, representing every sector of our economy, that convey their views regularly to the President, and clearly, regularly to the Department. There is just no need for more channels for advice on these issues.

Codifying the President's trade advisory structure is also a bad idea. The President ought to have, or the next President should have the discretion to organize his office the way he wants, and that includes how he gets his advice on trade and economic issues. Every President establishes a structure that works best for him. It would be a mistake to set any one system in stone.

Competitiveness impact statements also will not work that well. The process leading up to every legislative proposal should include consideration of its impact on our trade position and ability to compete, but establishing a new paperwork requirement that is not always possible to achieve will just burden the process. It probably will not improve the results, Mr. Chairman, either.

As I understand, we had a deficit impact statement a few years ago that was required on every piece of legislation and it has not seemed to help the deficit that much.

The National Trade Data Bank would be unmanageable and unnecessarily expensive as proposed. The Administration has proposed a trade data system, the Commercial Information Management System, that will meet the real needs of U.S. exporters without duplicating services provided by the private sector. It is not as ambitious as Senator Bingaman's but will be a lot more cost-effective.

Finally, Mr. Chairman, I also understand from staff that Senator Chiles has decided not to offer several amendments on registration of foreign investments in the United States during your markup of the bill, so I will not take the time now to comment on these proposals as they were previously publicized and as I have put into my prepared statement.

Should the Senator from Florida decide to offer those amendments, I would be happy to comment on them.

In conclusion, Mr. Chairman, the Administration has a number of concerns with the bill in its present form, and there are several features that if you keep them in it would make it difficult for us to recommend to the President that he approve the bill.

I thank you for the opportunity to testify, Mr. Chairman.

Chairman GLENN. Thank you very much.

Ambassador Alan Woods, Deputy United States Trade Representative. Mr. Woods, we welcome your statement, either in its entirety, or a summarized version. In either event it will be included in the record in its entirety.

Mr. WOODS. If I may, Mr. Chairman, I will summarize my statement and ask that the rest be included in the record.

I welcome the opportunity to appear before the Committee to discuss the proposals that are now before you on reorganizing the trade policy functions in the U.S. Government.

Mr. Chairman, I understand the widespread frustration that exists with the trade deficit. The reorganization proposal that is before you now is in a sense one of a wide range of proposals spawned by that frustration.

However, we know that we cannot solve our trade problems through trade policy or through trade law enforcement changes alone.

That is why we are working in the Administration on the economic fundamentals which affect U.S. trade; exchange rates, economic growth, both here and abroad; the Federal Government's budget deficit, which American and foreign investors are underwriting instead of putting money into productive investments. And it is why in February the President sent to Congress a package of proposals aimed at enhancing American competitiveness.

Our work in these areas has begun to establish conditions that are making it possible for U.S. companies to succeed in the global marketplace. From that perspective, the existing institutional arrangements for developing and coordinating trade policy and for implementing our trade laws are working pretty well.

While we understand the attractiveness of the trade bill as a vehicle for the reorganization proposal, we believe that linking the two could be counterproductive. The trade bill is moving fast—to fast to allow Congress and the Administration to develop a sound concept of the Executive Branch trade function.

The Administration believes that the proposal now before this Committee suffers from the kind of rapid development we would caution against. More to the point, we do not believe that a reorganization which shifts two of the offices which are currently part of the Department of Commerce's International Trade Administration into USTR would improve either the quality of U.S. trade policy, or the effectiveness of our trade program for implementing U.S. trade laws.

In fact, just the opposite might occur.

The specific offices which the proposal now before you would shift to USTR are the Office of the Assistant Secretary for Trade Administration, which is responsible for the enforcement of our antidumping and countervailing duty laws, as well as the antiboycott compliance and export controls, and the Office of the Assistant Secretary for International Economic Policy.

Let me explain why we think these shifts could be counterproductive. The reorganization proposal suggests that the two offices would provide, "the intelligence capabilities necessary for more effective trade negotiation, and the enforcement mechanisms necessary for more effective implementation of our trade policies."

On the enforcement side, that concept of how the U.S. Government should operate runs counter to current legislative directives to de-politicize enforcement and to minimize the use of trade policy as part of an enforcement mechanism. Antidumping and countervailing duty determinations are made on the basis of an administrative record. Trade policy interference can, in fact, be grounds for reversal in the Court of International Trade and the joining of trade negotiating authority and enforcement responsibilities could lead to the belief, both here and abroad, that we are trading off trade policy interests with legal enforcement requirements.

With respect to the Office of International Economic Policy, USTR already enjoys the benefits of this office's work. Moving this unit into USTR would not enhance our efforts. Thus, we agree with the position of the Department of Commerce, the International

Trade Administration should not be split up. Both the Office of International Economic Policy and the Office of Trade Administration should stay where they are.

Transferring these responsibilities to USTR would expand its mission while diluting its focus and hampering its function. The Trade Representative now concentrates on trade policy development and trade negotiations. These are his highest priorities. Weighing the Trade Representative down with thousands of enforcement decisions would take away from the time and attention he now devotes to trade negotiations and to ensuring that the entire U.S. Government is in accord on trade policy questions of National importance.

The reorganization proposal would also hinder the Trade Representative's ability to carry out his mission by changing the status of USTR vis-a-vis other Government agencies. USTR's trade policy development process, the structure of inter-agency decision-making committees and the private sector advisory groups it manages work well because USTR can be the broker that brings together conflicting interests.

By giving USTR the kind of operational responsibilities envisioned in the proposal, Congress would almost automatically reduce USTR's ability to serve in this broker capacity. It would, for example, have increased responsibility for industrial trade but not for agriculture, whose interests in all instances are not the same.

What the proposal imagines is that some sort of centralized trade agency is both feasible and desirable. Frankly, we think there is little evidence to support such a view. All Governments, even those with trade ministries such as Japan's Ministry of International Trade and Industry, disperse trade responsibilities to some extent.

For example, on U.S./Japan trade issues our USTR negotiations have faced negotiators from the Ministry of Foreign Affairs, the Ministry of Agriculture, Forestry and Fisheries, and even the Ministry of Transportation, as well as MITI representatives. In a sense, you could say we are already more centralized than they are.

It is not possible to bring all trade functions into one agency. The Japanese do not. The European Community does not. The range of policies which affect trade policy are just too diverse to have under one roof.

In addition, other factors also argue against a reorganization of the kind envisioned in this proposal. The first of these has to do with placement. USTR is today a small office within the Executive Office of the President. If USTR staff were to grow from 140 to 1,150 USTR would become the largest unit within the Executive Office.

It would also expand beyond policy functions to assume increasingly operational roles.

Our final reason for opposing this reorganization proposal is the disruption it would cause at a very critical time. As many of you know, we are deeply engaged in the Uruguay round of GATT negotiations. We are also reaching a critical point on our free trade negotiations with the Canadian Government, and we are engaged in multifaceted bilateral negotiations with the Japanese, as well as with Korea, Brazil and a number of other countries.

All of this work would be upset, if not upended, by a trade reorganization. Now is simply not the right time.

Before closing, Mr. Chairman, I would like to mention at least one other proposal and associate myself with the remarks of Secretary Brown on the subject of investment, but also mention the subject of the Council on International Competitiveness as proposed in H.R. 3 and, I understand, by Senator Bingaman.

I want to lend USTR's support to the position the Commerce Department has taken in each of these instances. With regard to the Council on Economic Competitiveness, particularly, the Private Sector Advisory Committees now in place already provide the kind of advice envisioned by these proposals, and they do so at virtually no cost, at least as compared to the budget that H.R. 3 envisions, which is almost the size of the entire USTR budget as it now exists.

Mr. Chairman, I thank you for allowing me to present our views on these proposals, and I would be pleased to answer any questions the Committee might have.

Chairman GLENN. Fine. Thank you very much, Mr. Ambassador. Thank you both.

Mr. Brown, you commented that out of $15 billion in basic research in the country, $11 billion is Federally funded. I will not question your figures, but I have other figures here that do dispute that. I read an article in Chemical and Engineering News which analyzed the Federal budget and what is being spent on R&D. They say that it is only $8.3 billion and 70 percent of that goes to defense.

Does that agree with your figures? I do not believe it does.

Mr. BROWN. Apparently not, Mr. Chairman. I am not sure that I can speak to either one of them. The figures were given to me by the people in the Commerce Department who make that assessment, but I think they were including all of the funding that the Federal Government does through its wide variety of activities in support of State educational institutions and other kinds of funding.

Chairman GLENN. Would that include NIH and some of the funding there that is medical research and would not have a direct commercial application?

Mr. BROWN. It would include NIH because the medical research there touches on biotechnology as well as on pure disease control research.

The other point I think that needs to be made is the amount of private research in the United States is very hard to get a handle on because some of it is done by very small organizations, but it is still going on, and we do not hear about it until you get a breakthrough like superconductivity or some other kind of thing that is discovered.

Chairman GLENN. You believe just as much as I do that technology development is vital to the health and well-being of the U.S. economy and I am gratified to see that you support the notion in S. 1233 of combining the various technology offices within the Commerce Department. But I believe the assignment now is to an Assistant Secretary rather than to an Under Secretary.

Do you plan to upgrade at any time so that it receives more emphasis within the Department?

Mr. **Brown**. We do not think that establishment of a higher grade office necessarily enhances the administrative abilities of the organization. Right now the most significant technology operation we have in the Department of Commerce is probably the National Bureau of Standards, which is run by a director who has technically the Assistant Secretary level.

We also have an Assistant Secretary at the level of OPTI, and an Under Secretary in Economic Affairs who serves over OPTI and the Census Bureau. So the organizational structure is to try to combine the economic affairs activities into one organization, to try to provide that the trade activities become another organization under an Under Secretary as Economic Affairs is, and to leave NBS at the Assistant Secretary level where the work is essentially research and setting standards.

Chairman **Glenn**. In your testimony, as well as in testimony recently before the Commerce Committee, when asked to identify what the Administration is doing to encourage technology development, you pointed to changes in the antitrust laws as they pertained to certain R&D ventures, the R&D tax credit, the NSF Engineering Centers, and the NSF Cooperative Industry/University Research Centers.

Those all address basic research, and I am all for that emphasis on basic research, but one of the reasons we have this bill before us is to try and provide a bridge between the basic research and developmental activities. We try and address the root problem of why U.S. firms are failing to keep up with other nations in the commercialization of R&D

Can you identify the Administration's efforts in encouraging the commercialization of National R&D endeavors?

Mr. **Brown**. Mr. Chairman, the Commerce Department will tomorrow culminate with a press conference the announcement of a study of the technologies that we consider to be the most promising emerging technologies for the next decade or so. In other words, those technologies that will be providing the most employment and perhaps the greatest contribution to the gross national product in the United States and perhaps the world.

In doing that study over the last couple of months, we also recognized that many of these technologies were going to have to be applied or they would not come true as the providers of employment in GNP contribution, and so we had an aggregate of people in the Department, not just in the National Bureau of Standards, but in the trade area and others, look at the barriers that we saw to the utilization of these technologies and their application.

We identified the high cost of capital; less favorable tax incentives in this country than exist in some other competitive countries; a management focus in the United States on the short-term rather than the long-term goal for returns on investments; inadequate laws, regulations, and enforcement of the protection of intellectual property rights; a dependence on domestic markets rather than the breadth of international markets; a product liability situation in the United States which is unique in the world and adverse to the development and utilization of new technologies; and the antitrust laws and some regulatory restrictions and barriers in the United States that do not exist elsewhere.

All of these things, we think, serve to slow the application of technologies in the United States or work to the disadvantage of the application of those technologies in the United States as compared to their application in countries such as Japan and even some of the European countries.

Chairman GLENN. You give R&D tax credit as one of your proposals for encouraging commercialization, and yet I think we just passed a tax reform act last year, and of the basic drives for passing that was because over a 10 year period we had gone from revenue-foregone for tax incentives and loopholes, revenue that the Government did not collect, of about $126 billion 10 years ago. It had gone up just last year to $400 billion per year.

That was one of the basic underlying pushes for the tax reform act of last year. I think it is unlikely that we are going to get a big R&D tax credit now because we start right back up that same old revenue-foregone track that we just got ourselves out of partially with the tax reform act. I just throw that in as a consideration for you when you are considering tax R&D credits.

Mr. BROWN. Mr. Chairman, in real life as opposed to the Government, I am in the country newspaper business, which is heavily equipment intensive. And so as a private sector individual I was a little bit pained to see that the 10 percent investment tax credit disappeared in the current tax law. However, I am advised by my accountant that this year's profits, if any in our little company, will be taxed at 38 percent rather than 46 percent.

Now, my only problem is that until my auditor, and therefore, tax advisor, gets through with the books on the business, I do not know whether I am better off or worse off under the new tax law than I was when I had the 10 percent investment tax credit. My guess is there are a lot of other businessmen who are in the same boat, most of them with bigger businesses than the one that I operate.

But when that news comes in, I think if it turns out that you are better off if you have a total tax reduction on your profits, maybe we will get the same kind of stimulation that we had in the tax reduction act in 1981, which, incidentally, set some records in terms of investment in new equipment and plant in this country. I think it set a record in those three years that only equated with the period at the end of World War II when we converted from wartime to peacetime production, and were getting over the depression of the 1930's. That was the previous record in capital investment in new technology.

Chairman GLENN. Well, I would agree that the tax credit started an advance there, but I would also submit that I think we went far too far with it because we wound up with $200 billion-plus deficits each year since then, too. So while we could cut back some with our revenues—we cut back a fourth over a three-year period—at the same time, neither Congress nor the Administration proposed budgets that would equal that kind of a reduction in revenue.

We wound up with some $200 billion in arrears and we are still living with a deficit in excess of $200 billion, as a matter of fact, and are trying through Gramm/Rudman/Hollings and a lot of fictitious acts like that to try and bring ourselves back down to some sort of reality here.

I would not give the President a lecture on how to conduct economics—well, maybe I would, too—[Laughter.]—but I think Maggie Thatcher did a little better with the same objective in mind than Ronald Reagan did. She said, okay, we will cut back on expenditures, and then when we get them down to a manageable level we then will reduce taxes. He went the other way and said we will reduce taxes by a fourth and just hope that we can bring our spending back under control, and then submitted the most unbalanced budgets in all American history to us for several years in a row, and now we sit with $200 billion-plus deficits.

So I would not say that your investments that occurred early on were necessarily a blessing.

Mr. Brown. Mr. Chairman, you diverted me with the use of the term "fictitious" to modify the Gramm/Rudman/Hollings legislation. You are talking to the guy who has to put together the budget for the Commerce Department and who has been at almost flaw zero now for three years. It may be fictitious to you, but I can tell you that it is a very strict diet for me.

Chairman Glenn. When I said fictitious, I meant it regarding our ability to get back to a truly balanced budget. I just think we have had big difficulties, obviously.

My time is up. Senator Pryor.

Senator Pryor. I will ask one question to Ambassador Woods.

First, Mr. Ambassador, I made reference to your statement a few moments ago about the emphasis on the industrial sector, should we consolidate and go to a USTA 98 percent I believe your statement said. Now, that leaves about 2 percent for whatever else is left over.

Would that mean that agriculture would be getting the short end of the stick, so to speak here?

Mr. Woods. I do not know that you could say it was that low, Senator. What I think that refers to is that if you take the number of people we now have devoted to agriculture at USTR and you hold that number up against the 1,140 to 1,150 people that would be in the combined agency, that that number would come out at about 2 percent, and that is indeed the case. In fact, 2 percent might be slightly high in that circumstance.

I do not believe that the work of the U.S. Trade Representative would be less—agriculture would not hold a less important role than it does today, but certainly in a resource allocation sense, the attention, in resource terms, of a U.S. Trade Representative would be much more captured by having to deal with a range of issues that were more industrial than they were agriculture.

Senator Pryor. Well, as you know, this is the Committee that deals in, from time to time, reorganization efforts to make Government work better or more efficiently, et cetera. Sometimes we fail in that obligation, I think, miserably—not the Committee, but the institution of Congress.

Now, you have a lot of things to say about S. 1233, not all of which I would say are positive. You question timing, et cetera. Now, do you have any suggestions for us here? Let's say if we do not have S. 1233, do you have any suggestions for us? How we might make the whole issue of trade and the issue of those people dealing with trade more efficient or workable and more representative of our economy and the taxpayers that we represent?

Mr. WOODS. Well, let me say that the Administration does not have, as Secretary Brown said, a formal position on what reorganization proposal in trade should look like. But let me further say that it seems to us that the way to do that is for the U.S. Trade Representative and the other agencies in this city that are involved in trade in the private sector to appear before this Committee over a period of time and to bang out what our trade circumstance ought to look like.

There are a lot of things about the system that we have now that are very good. There are some things that lack, shall we say, efficiencies. The fact is that we have unique circumstance in this country and I am not sure that we are not better off than some of our trading partners.

Our Trade Representative, our trade negotiator, sits in the White House. He is a part of the Executive Office of the President, is at the right hand of the President. Well, no other trade negotiator for any other country has that status. They are, as one of the people at USTR put it to me, just another Cabinet Officer, with apologies to all the Cabinet officers.

That is the way that that works in other countries, and yet those Cabinet officers in those countries do not have total authority over trade. As I mentioned, in Japan we from the U.S. Trade Representative have faced negotiators from the Ministry of Finance, the Ministry of Foreign Affairs, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Transportation. MITI does not do all of their negotiations, and yet we do do all of ours in that respect.

So it is a mixed bag and I think we ought to recognize that our current organization is and that there is probably no perfect organization.

Senator PRYOR. Thank you.

Mr. BROWN. May I jump on that question just to make this point, Senator Pryor, and that is that in the 1988 budget the significant request for additional funds that has been asked for by ITA is to support USTR in its role as the chief negotiator at the multi-lateral round of the GATT negotiations that grew out of the conference at Punta del Este where the agenda was set by a combination of American negotiators; Secretary Lyng of Agriculture, Secretary Baldrige of Commerce, the U.S. Trade Representative, of course, and others.

During the next few years when that occurs Commerce will be the resource office, literally, here in Washington for whoever is doing that kind of negotiation, wherever they are doing it. As I understand it, that is the way it happened last time, and each of these GATT negotiations as they have progressed and broadened has been relatively successful, we think, in extending the free and fair trade regime around the world.

Chairman GLENN. Senator Roth?

Senator ROTH. Well, let me just read part of the opening statement of our next witness, because I think it articulates the basic situation today very well.

It says:

At present the United States has two trade policy agencies, both of Cabinet rank; the Department of Commerce and the Office of the U.S. Trade Representative. A certain amount of bureaucratic duplication and turf fighting is inevitable in that circumstance.

Gentlemen, I feel very strongly that is the case. I am not saying that our present USTR does not work well with Mac Baldrige, but to be candid, it has taken several years for the trade mechanism of this Administration to shake out.

Now, we are facing a new election next year, and what bothers me, Mr. Chairman, is that we are going to—I do not care who is elected—well, I do—[Laughter.]

Senator PRYOR. I noticed, Mr. Chairman, that was the second time today that the Senator from Delaware said that. I was about to call his hand on that.

Chairman GLENN. This is a non-political Committee we have.

Senator ROTH. But what concerns me is that we are going to spend months, if not years, in trying to sort out who has primary responsibility. As I have said many times, I do not care who is appointed Secretary of Treasury, by virtue of being that Secretary, Mr. Chairman, he is a powerful person. Now, some are more powerful than others, admittedly, but because of the Cabinet Department, because of its responsibilities, because of its bureaucracy in the better sense of the word, the Secretary is automatically a powerful person.

That is not true of the USTR, or frankly, of the Commerce. They have to fight. Strauss, because he had close contact with President Carter, was very powerful.

But I really do not understand how the agencies can come up here, to be candid—and I want to say, Ambassador Woods, I think you were a key factor in helping bring about the trade bill in the Finance Committee. I thought your contributions were very helpful and moved the Committee forward.

But I just think it is outrageous to say that we cannot get better organization, if you look at the importance of trade for the future.

I think that was more of a speech than a question.

Mr. BROWN. May I respond, Senator?

Senator ROTH. Yes, please.

Mr. BROWN. I do not know that I said that you cannot get better organization. I said that I did not think this particular proposal was better organization, and one of the flaws, I think, fundament to this proposal is that it suggests that there is a difference in the United States between domestic business and foreign trade, and I have been out on the stump making speeches to suggest to American businessmen that as soon as the product—whatever it is that they produce or service—hits their loading dock, it is in international trade, whether it is going across the street, across the State, across the country or across the ocean, because everybody else is doing their foreign trade in the United States.

We are the biggest market in the world and we are a target because of that. And so I would suggest that we need something that combines them—if I can simplify my testimony into one phrase—combines the approaches to foreign trade rather than further separates those approaches to foreign trade. I do not think our positions are necessarily inconsistent.

Senator ROTH. Would you agree to the Department of Trade that was under discussion a year or two ago?

Mr. BROWN. Well, the Secretary's position on that, I think, was quite well known. The Administration's position was supportive until it became apparent that it was not going to succeed. As I said in my testimony, I do not know that the Administration has come to a conclusion about what it might wish to introduce, but it has been asked to comment on this bill, and we have.

Senator ROTH. One of the reasons it did not succeed was because of the turf war between the two agencies.

Mr. BROWN. I think not just between the two agencies.

Senator ROTH. No. There were many others involved, too.

Mr. BROWN. That is the problem. There is a lot of turf involved in all the agencies and if you could combine it you would have a stronger trade operation.

Senator ROTH. You are never going to consolidate 100 percent—those of you have commented—you are never going to consolidate 100 percent and split the pie so other agencies do not have a voice, when they should have. But what concerns me is that there is no one in Government currently, automatically that can speak with the same authority, same voice, on trade that the Secretary of State can on other international matters, and I think that is the key to our concern.

Ambassador Woods?

Mr. WOODS. Yes, Senator. I think you point out an interesting problem, because you said, I believe, that there are two trade policies in the United States Government, or two trade policy makers in the United States Government, the Secretary of Commerce and the U.S. Trade Representative.

In fact, you would also have to include the Secretary of Agriculture, you would have to include the some of the functions of the Agency for International Development in the Department of State, you have to include the EXIM Bank, you would have to include OPEC, and that is one of the reasons why I think we question seriously whether or not the system that we have should be changed that much.

And that is, that at the U.S. Trade Representative's office, as we deal with trade, we bring all of those communities of interest together, in addition to the private sector, and try to hammer out a U.S. Government trade policy. And when the U.S. Trade Representative does speak, he speaks for the community of interests.

To do that he does not need to have operational responsibility for every single aspect of that trade policy, and as you have quite accurately pointed out, he cannot have. We are never going to have 100 percent, and the only question is, how much of it and who has responsibility for pulling together the trade policy into a coherent national trade policy on the one hand and who has responsibilities for day-to-day operations of that trade policy on another, and those people do not, it seems to us, necessarily have to be the same people.

Senator ROTH. Well, the thing that bothers me with that point of view, Ambassador Woods, is that to me it makes no sense to have one agency involved with data collection, another with negotiations, and then go back to the other for administration. It just seems to me that there is a great inconsistency. You are right that you are never going to totally subordinate to one agency all aspects, but I do think that somehow we have to streamline the trade picture and give it the prominence that is essential if we are going to succeed in the next century.

So while I argue with some of the proposals, I think the Chairman and I are one in agreeing as to the need of reform.

Thank you, Mr. Chairman.

Chairman GLENN. Thank you. Senator Levin?

Senator LEVIN. Thank you, Mr. Chairman. Did Secretary Baldrige speak for the Administration last year when he supported Senator Roth's bill?

Mr. BROWN. Yes.

Senator LEVIN. Does the Administration support that bill this year?

Mr. BROWN. I think the Administration has taken no position on the bill this year.

Senator LEVIN. Senator Roth?

Senator ROTH. That is correct.

Senator LEVIN. What has changed since last year that has changed the Administration's position?

Mr. BROWN. Well, I do not know that the Administration has been asked to take a position on the bill. The Administration was asked to take a position on this bill, and I would point out that this bill does separate economic affairs from the United States Trade Administration, as I understand the way the bill is drawn. And further, separates patent and trademark policy, intellectual property rights, which are part of the Punta del Este trade round that the U.S. got on the agenda. That is why I have difficulty with this bill.

Senator LEVIN. Putting aside this bill just for a minute——

Mr. BROWN. But that is what I was asked to testify on, sir.

Senator LEVIN. I know. Do you have any reason to believe that the Administration's position has changed from last year?

Mr. BROWN. I cannot tell you that. I do not know.

Senator LEVIN. You do not know whether it has changed. Do you know whether Secretary Baldrige's position has changed since last year?

Mr. BROWN. I think Secretary Baldrige has consistently supported the effort to bring about a coordination of trade policy. That coordination, as I said earlier to the Chairman, I think has been achieved as much by the personality of the people involved in it as it has by any other institutional restructuring, and some of the personalities have changed in the Adminstration over the last few years.

The Secretary has been here consistently so his position is unchanged and he is happy to work with the personalities he has to deal with now.

Senator LEVIN. My question did not relate to coordination. My question related to the Roth bill to consolidate, and I was wondering whether or not you know whether Secretary Baldrige's position supporting that kind of consolidation remains or whether it may have changed from last year.

Mr. BROWN. I cannot speak to that. I think that is a position that one would have to ask the Secretary in view of the fact that he gives it his full attention and I give it the attention that he directs me to give it.

Senator LEVIN. If we were going to reorganize in the way set forth in our bill, would you prefer that the trade administration be part of the Executive Office or that it be a free-standing agency?

I would ask both of you that question. I know you oppose the bill, but you have been asked to testify. Being a supporter of last year's consolidation bill, I must tell you that I am not sure which is the better approach. I would have to agree with our Chairman—we need reform. But I am not sure whether or not last year's approach was better than the one in this bill.

In any event, I am asking your opinion, rather than trying to reflect my own. Do you have an opinion as to whether or not, if we were going to adopt this bill as a general outline, whether you would prefer the USTA as a free-standing agency or as part of the Executive Office?

Mr. BROWN. Let me try that one first, having served in the U.S. Congress and now serving in the Administration. The purpose of the peculiar position of the United States Trade Representative was as a creation of the Congress, and a spokesman for the Congress in negotiating the international treaties related to trade so that the U.S. Trade Representatives could come back and go directly to the Congress with the effort to get an endorsement or passage of that treaty or those negotiations.

From the standpoint of the Administration, or rather, the Department of Commerce, I think the Secretary's support for a centralized Department of International Trade and Industry was for a departmental level without reference to the USTR's rather peculiar current position.

Senator LEVIN. Ambassador Woods?

Mr. WOODS. The question that you ask is actually quite complicated, although it seems quite simple, as I am sure you understand. What I think we have discovered is that because the interests in trade policy are as diverse as we discussed earlier, there is a need in the White House for a trade policy coordinator. That role is currently served by the U.S. Trade Representative.

On the other hand, if you were to create a U.S. Trade Administration that has this vast operational role with well over 1,000 people as suggested by this bill, you have to wonder whether that really is wise to put that in as part of the Executive Office of the President. So it might be better left outside, the operational aspects.

Senator LEVIN. I am not sure, Secretary Brown, that I understood your answer to the question. Ambassador Woods says it might be better left outside. Do you agree that if we were going to create a USTA along the lines outlined in this bill that it might better be left outside of the Executive Office?

Mr. BROWN. Well, I find the idea of further separation of trade functions not a very attractive choice. If you had a DITI—and that was the line that was pursuing with me earlier, that is a Department of International Trade and Industry—I would prefer to see it as a department than to see the functions of the current Department of Commerce put into a United States Trade Administration—I agree with my colleague here—and have those rather sizable functions, which I might say are legally oriented—the export administration, both for import and export enforcement is not a negotiating process but rather an enforcement process.

Senator LEVIN. Let me ask the question again, because I am not sure how clear it is.

Mr. BROWN. To summarize, I think it ought to be outside. I think it ought to be in a departmental function because the things that you have added to the Trade Representative's role in establishing this separate United States Trade Administration are literally departmental oriented functions which are technical enforcement functions that do not have anything to do, I think, with negotiations.

Mr. WOODS. Or more importantly, I think, policy, which is the critical central function.

Senator LEVIN. Secretary Brown, you made a reference to the R&D tax credit, and I was not quite sure what your reference was. Were you saying that the Administration would support the reinstitution or the continuation of the R&D tax credit?

Mr. BROWN. We did in the negotiation of the tax bill last year.

Senator LEVIN. That credit runs out in what year?

Mr. BROWN. I am sorry. I am not an authority on the tax law.

Senator LEVIN. The Administration would support its continuation?

Mr. BROWN. The Administration has supported the increase and expansion of research and development. I can only assume it would but I cannot answer that question specifically. That might better be asked of someone from the Treasury Department.

Senator LEVIN. One other question. If you were going to create a USTA, either inside the Executive Office or as a separate agency, would you suggest that the responsibilities of the U.S. and Foreign Commercial Services and the Office of Trade Development be transferred to it? Those two offices are not transferred as I understand the Chairman's bill.

Would you suggest that those two offices, the United States and Foreign Commercial Service and the Office of Trade Development, be transferred to a new USTA, whether it is in the Executive Office or a separate department.

Mr. BROWN. Senator Levin, it is very hard for me to comment on that speculative concept because I do not understand what a separate United States Trade Administration's position is. Right now, enforcement, both import and export administration, are functions of the Commerce Department. As my colleague has noted, that is not policy, that is administration, if you will. That is the responsibility of seeing that a law or a negotiated process or a treaty is carried out.

The United States Foreign Commercial Service and Trade Development are two operations of promotion. The Foreign Commercial Service deals with both American producers of goods and services in the United States, trying to encourage them to get into international trade, and when they are abroad, the Foreign Commercial Service officers assist them in their contact with other countries.

It is not negotiation. It is trying to sell American products abroad.

Senator LEVIN. So you do not have a preference one way or another?

Mr. BROWN. I think that they ought to stay in the Commerce Department. I think they ought to be associated with the Census Bureau, which gathers international trade and business statistics and ought to be part of the function as it is rather than part of a negotiating function because the two do not fit together organizationally. They fit together functionally and we function very well with the Trade Representative and his role as a negotiator.

Senator LEVIN. So, as I understand your answer, if we did create a USTA—and I understand you object to that, the way the bill structures it—but if we did do it, you would oppose the transfer of those two entities to a new USTA for the reasons you just stated?

Mr. BROWN. I oppose the transfer of export and import administration to the USTA——

Senator LEVIN. I understand you do that, too.

Mr. BROWN [continuing]. Which brings us right back to the USTR as it is now constituted.

Now, if you want to bring it all together and put it under one head—and I am including the statistical services, the Patent and Trademark Office, and so forth and so on—then you would have a departmental organization in which the Trade Representative would be subsumed as the negotiator for these functions that involve a whole lot of other things, including such rather limited organizations in terms of size and subject matter in the Commerce Department as the National Technical Information Administration, which negotiates international understandings on communications.

Senator LEVIN. I think my time is up. Could we get a quick yes or no answer out of the Ambassador? Assuming we did it and you oppose it—we understand that—would you have any position as to whether those two additional functions should be transferred to that new USTA?

Mr. WOODS. Without it being so quick a yes or no, I think the importance would be to consolidate functions as opposed to split them apart, and I think the bill as it is currently constructed tends to split functions apart rather than consolidating. So whether you are in or out, they ought to be together.

Senator LEVIN. One place or the other. Okay. Thanks.

Chairman GLENN. Just a couple of questions, gentlemen.

Ambassador Woods, you indicated that you thought the USTR had considerable clout at the negotiating table mainly because it exists in the Executive Office of the President.

Would he not have even more clout if trade enforcement was made a part of that jurisdiction? Would not his counterparts across the negotiating table see him as even more powerful under those circumstances?

Mr. WOODS. Well, the way we have our trade enforcement mechanism set up, Senator, I do not believe so. Our trade enforcement activities—specifically, I would assume you are referring to the antidumping and countervailing duty laws—are quasi-judicial in nature. And in fact, the activities and the operation of those laws—I would say the U.S. Trade Representative would almost have to create some sort of a barrier between himself and that activity when he was negotiating with the Government on one hand and when there was an antidumping or countervailing duty action against that Government on the other, or he would be liable to drawn into court and have his actions judged in part of the Court of International Trade in some way.

Chairman GLENN. Well, I would think if I were negotiating across the table from someone and I knew that they had the clout to enforce what it was being negotiated, I would think that person was considerable more powerful. I think that would be a stick in the negotiating process that would be very valuable to have.

Mr. WOODS. Well, in fact, under certain aspects of the trade law, and in fact, under section 301 of the trade law, that is the case. But that is a negotiator's tool, in a sense, whereas the countervailing duty and antidumping laws are quasi-judicial in nature and the USTR has responsibility for section 301.

Chairman GLENN. It is a good tool. I want to give him a big stick. That is the reason we proposed moving that Trade Administration under the USTR.

Mr. Secretary, here is a Washington Post article dated May 19, 1987, about the superconductor commercialization competition that we are into with the Japanese. There is a long article on it, and they canvassed many businessmen in this country.

I quote out of one paragraph here: "Most of the 20 officials of American companies interviewed for this article expressed doubt that American firms will win a commercial contest with Japan to exploit superconductors."

Now, do we have any doubt that one of the reasons we are having trade problems is that Japan has formed a cooperative approach between Government and industry to speed technology development so that new technologies are moved quickly into the marketplace? Would you agree that that is what they are doing?

Mr. BROWN. I am sure that they would like to make that attempt, and as I said to you, Mr. Chairman, in terms of superconductivity, I have attended an EPC meeting on that subject, and we have established within the Department of Commerce a cross-cutting mechanism for the discussion of superconductivity.

As a matter of fact, I conducted a discussion of that issue with my senior staff—that is, all of the Under Secretaries and Assistant Secretaries—at our meeting early in May when I think it was just breaking in the press, because the National Bureau of Standards has some authoritative information on the whole subject.

Chairman GLENN. Well, it would seem to me that ACTA would be very, very valuable in a situation like this. It will be ready not just for some great big magic breakthrough like superconductors but would be there for all the little breakthroughs that occur, to ride herd on these things all the way along.

That is why I do not see why you would oppose that particular part of this bill.

Mr. BROWN. Mr. Chairman, let me say that there are some peculiar things about DARPA, the defense agency that is involved in this research activity, which I think do not translate too easily into the civilian sector. DARPA evaluates projects in light of a coherent defense mission.

Civilian needs tend to be relatively unplanned an unpredictable. You mentioned superconductivity. We were, at the same time, just completing our work in the National Bureau of Standards on what those emerging technologies between now and the year 2000 would be.

Superconductivity was not predicted by that group. Superconductivity was really a specialized study by one or 2 separate agencies. As a matter of fact, the head of the National Bureau of Standards has this kind of study in his background and he conceded when the breakthrough came that he would not have predicted that anytime in the near future because of this rather long background in this. So you cannot produce some of these things on order.

You said—and I agree with you—that our problem is the adoption of the technology. DARPA does the technology and the research but it is not an applications agency, except as it applies to the military needs identified. In other words, they do the research in the area of a military need. Now, if that market pull exists, we think that research capacity of this country will respond to it.

On the other hand, we think it is very difficult to take breakthroughs and push them into a market if there is not a market pull dragging them into utilization. We think that that really can be addressed in a lot of economic ways, like the cost-to-capital and the question of how you reduce barriers, rather than saying, here is a technology, let the Government decide who can best produce a product out of it.

Chairman GLENN. Well, I will not belabor this except just to state what DARPA does.—They have scientists who are very thoroughly grounded in what the furthermost advances in different realms of science are.

They try and take their knowledge and see what the cutting edge is in that particular area and see if there is a military application for it. They then move it, the military being their customer, their sole customer—they move that into military use and the military either picks it up or does not, depending on cost, Congress and a whole lot of other factors at that time.

The people at DARPA are the ones that figure out the military possibilities of what can be done with a particular scientific advance, and that is their whole life. Now, we saw ACTA as doing sort of the same thing in the civilian marketplace, as having the scientists who can coordinate all of the activities going on now, who can put some money into advanced areas where it looks like a little additional push might make a breakthrough, and then bridge that gap, be the principal implementor in relating the new technology to private industry, just as DARPA does to the military now.

So that is the role we envisioned for ACTA, and I think it is one that—I will not say that it is a MITI-type organization that Japan has, but it would certainly perform some of those functions that I think would be very, very valuable. We would not be—I repeat—selectors of particular industries per se. We are not trying to establish an industrial policy with this—those two awful words these days, industrial policy—but we are trying to make sure that nobody, anywhere, implements new scientific breakthroughs more rapidly than we do.

For instance, at in DARPA if you go and talk to some of the scientists over there, they are a little bit surprised that we have not moved more rapidly in taking some of their advance, that do not have just a relationship to the military per se. They are surprised that we have not moved those into the civilian marketplace, because some of the things are not necessarily classified. ACTA would do this.

Mr. **Brown**. Mr. Chairman, we are not very far apart on this, and you and I see many of these things in the same way. Let me just suggest that as you know I once represented Wright-Patterson Air Force Base in Ohio when I was in the Congress, and there is a lot of research and technology developed there which I hope can move into the private sector for utilization.

When I got involved in the Commerce Department, we undertook to open the laboratories of the National Bureau of Standards to the private sector for the private sector to go in and use some of these National treasures in which to do some of their research to establish the things that they would like to establish for their particular proprietary interest.

I hope we can do that with military laboratories in the future. Certainly we are trying to implement that in all of the laboratories of the Federal Government, including DOE and others besides our own, modeled, I might say, Mr. Chairman, after what NASA has done to some extent in the past with its own.

I would like to take just an additional minute if I could to comment on what the National Bureau of Standards now does. First, its budget is about 50 percent derived from other than Congressional appropriations, either Government agencies or the private sector.

It has research associates from the private sector that come and work in the National Bureau of Standards to find out what the new and developing technologies are, and because some of the funding comes from the private sector and the other agencies, we feel that we are close to the market developments—that is, the demand pull that those agencies have—and can do the development of standards and research in those areas.

We found out that there was a problem with the computers of one of the largest American corporations being able to talk to each other, and when they decided that they wanted to change a computer, they had to change their whole range of computers because the computers did not communicate and were not interconnectable and interchangeable. So we undertook in ICST, the Corporation for Open Systems. That has now been totally transferred out—that is the operation of the Corporation for Open Systems, into a private sector operation where the computers are now talking to each other.

Flowing from that was the Automated Manufacturing Research Facility where we demonstrated that we could have metal bending or metal treatment machines computerized to relate to each other so that small businesses could take advantage of it inexpensively, or big businesses could have a facility together.

We have some 20 companies that have taken advantage of this for various purposes.

In addition, let me just suggest that we have in the $700 million that I mentioned that has grown out of ventures formed under the National Cooperative Research Act, we have some 61 operations there which have done exactly what you propose, and that is utilize technology that is developed in both Government operations and also in the private sector under the National Cooperative Research Act.

I want to mention just one final thing, and that is that with reference to the Federal laboratories or research done by Federal funds, the Administration has now succeeded in getting through the Congress and becoming policy the idea that the Federal employee or the person doing the research at the university with Federal funds will get his reward in terms of residuals from any patent that that laboratory or that university wishes to file and privatize or commercialize on from the Federal funding.

So we think we have made some headway in the last few years in changing the barriers that exist for people in implementing the discoveries and the results of the research in the private sector and the Government sector.

Chairman GLENN. Good. Thank you, gentlemen. You have patience with us as far as your time goes and we appreciate that very much.

Are there any further questions?

Senator Levin?

Senator LEVIN. Just a couple more questions. Secretary Brown, I want to press you a bit on your statement on page 5 about re-evaluating several aspects of the Government's commitment to the R&D tax credit. I asked you about that a few moments ago, and I have a slightly different question.

What do you mean by re-evaluating the Government's commitment to it? The tax credit has been reduced from 25 percent to 20 percent and runs out at the end of next year. Under last year's tax reform bill the credit was reduced and the credit is going to run out. What do you mean by re-evaluating the commitment? Do you mean re-evaluating it upwards or downwards?

Mr. BROWN. The Administration supported in both the House and Senate versions of the tax bill last year before it was finally passed by Congress the extension of the research and development tax credit.

Senator LEVIN. At a lower rate?

Mr. BROWN. I do not believe so.

Senator LEVIN. My question, though, is not as to what they supported but what you support.

Mr. BROWN. I think they supported a continuation of it.

Senator LEVIN. My question is as to what you mean by the words. I am not clear. When you say that the President's proposals include re-evaluating several aspects of the Government's commitment to that tax credit, I am not sure what you mean by that.

Mr. BROWN. In the President's proposal on competitiveness—and let me try to get the——

Senator LEVIN. No. Just what your understanding is of it.

Mr. BROWN. My understanding of it is that the President's program for competitiveness asks for the extension of the proposals for tax credits for research and development.

Senator LEVIN. The other question has to do with the competitiveness councils which were part of the compromise last year and will be part of the proposals again this year. These are councils which would take the initiative inside the Department of Commerce to invite in various sectors business, labor, and the Government regulatory agencies to see if we cannot get some concessions from all three of those components in order to become more competitive, whether it is the semiconductor industry, auto, steel, textiles, shoes, electronics or what have you.

Can you tell me how often the Department of Commerce has invited in all three components—and you may want to add a fourth——

Mr. BROWN. Which sectors, sir?

Senator LEVIN. In any sector. On how many different occasions or in how many different sectors? I know you have done it in steel, but outside of steel, are there any sectors where you have invited business, labor, plus the government regulatory bodies to see if each of those three components could make concessions in order to make that sector more competitive and to survive? Outside of steel, where has the Department of Commerce invited in those components in any sector?

Mr. BROWN. We have had two Advisory Committees, sir, since I have been in the Department that have entered into negotiations between labor, Government and business; one, established by the Secretary, one established by the Congress. The one established by the Congress is still functioning and that is on coal exports.

Senator LEVIN. What was the other one?

Mr. BROWN. Steel. You mentioned it.

Senator LEVIN. That is the one I mentioned?

Mr. BROWN. Yes.

Senator LEVIN. Okay.

Mr. BROWN. That was established by the Secretary as a special Advisory Committee. Now, in addition to that, there are 26 Industry Sector Advisory Councils and those Industry Sector Advisory Councils meet on a regular basis. They are made up of people from the private sector, both business, labor and others, in some cases representing institutions associated with that particular sector. They meet on a regular basis.

You also have the District Export Councils meeting around every one of the 50 offices of the Commerce Departments of U.S. Commercial Service people who are in the export business and who embrace a wide variety of kinds of exporters in a neighborhood, and in addition you have the President's Export Council which embraces 16 members from a wide variety of businesses and different kinds of sectors of private activity.

Senator LEVIN. Were the coal and steel councils useful?

Mr. BROWN. I think the recommendations that were made by the Steel Advisory Committee have been implemented to a great extent by the industry. And the one that is still going on is putting together its recommendations right now. They raise recommendations both for the consideration of the Congress, the consideration of the industry, and out of the Steel Advisory Committee came, for instance, one recommendation on how to address the unemployment that would result from the modernization of the industry, and my feeling is that that encouraged the policy of the Administration to ask for about $1 billion to be centered in the budget this year on those people who have lost their jobs in an industry as a result of either the decline of the industry or the impact of foreign competition on that industry.

Senator **Levin**. Does that all mean it was useful?

Mr. **Brown**. It means it was useful, sir.

Senator **Levin**. How about coal?

Mr. **Brown**. The Coal Advisory Committee has not finished its work yet. We expect to be finished probably before the end of summer.

Senator **Levin**. Thanks. Thank you very much, Mr. Chairman.

Chairman **Glenn**. Thank you, Senator Levin.

Thank you very much, gentleman. It has been very helpful to us, and we appreciate your testimony and we would hope that if we have further questions, we could submit them to you for a response so we could submit them with this report.

Thank you.

Our next witness is Gary Horlick, former Deputy Assistant Secretary of Commerce for Import Administration.

Mr. Horlick, we welcome you to the hearing today and look forward to your testimony, either in its entirety or an abbreviated version as you choose.

TESTIMONY OF GARY HORLICK, FORMER DEPUTY ASSISTANT SECRETARY OF COMMERCE FOR IMPORT ADMINISTRATION[1]

Mr. **Horlick**. Thank you, Mr. Chairman.

My name is Gary Horlick. I am a partner with O'Melveny & Meyrs where I specialize in international trade matters.

As you mentioned, I was Deputy Assistant Secretary of Commerce for Import Administration, responsible, in particular, for antidumping and countervailing duty measures. As such I am appearing here as an observer of trade policy and administration. I will summarize my prepared statement.

Let's start by looking at the current state of affairs. What you have, really, is two agencies in the U.S. Government at Cabinet level that both get involved in trade policy making and administration. You have the Department of Commerce, as you have heard, with almost 2,000 employees involved in trade, but the Secretary of Commerce, it should be emphasized, cannot think solely about trade policy. He literally has to worry about whether to close weather stations in Oklahoma and whether there are too many fish being caught off of New England. It is part of his job.

On the other hand you have USTR, which is officially 133 people—probably a few more with details. That is up from 55 people when it ran the entire Tokyo Round of trade negotiations in the 1970's. What that means is USTR is too big just to be a coordinator. With that many people inevitably it starts doing its own analysis and staff work. It also administers trade laws such as Section 301 and the Generalized System of Preferences. Quite frankly, it just does not have the resources to do it.

Now, one thing that is very important, and this has been recognized as early as 1980 when this plan went into effect, USTR is not in the White House in the sense that it is viewed as part of the

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[1] See p. 371 for Mr. Horlick's prepared statement.

White House. It is viewed as an outside Cabinet-level agency. What that means is the only coordination that is done of U.S. trade policy is through the EPC, or Economic Policy Council, an ad hoc Committee. That is temporary and has a total staff of one person.

There is no central coordinating staff. USTR tries to do it, but as I say, it is not "in the White House." That may sound metaphysical, but that is what matters more than anything else, apparently, over there.

S. 1233 eliminates this duplication. With two different agencies somewhat overlapping, you are bound to have more duplication of effort and, indeed, turf fighting than you would without it, and that happens with the best of wills.

This bill would result in one coordinated trade agency, and that is going to result in a savings in duplication of effort, and also, inevitably, if you have two agencies and the heads of both agencies have slightly different ideas, their staffs are going to head in slightly different ways. There is no way you can tell someone in the Commerce Department to head in one way if he knows that his boss, the Secretary of Commerce, is headed in another way. It would not be a very intelligent civil servant to do that.

One particular point worth noting in this duplication is I do not think you would lose anything in terms of the administration of laws such as antidumping, countervailing duty, or export controls. As Deputy Secretary Brown already pointed out, those are already run on a fairly routine basis and I think fear of politicization is misplaced there.

Moving these agencies together, I hasten to add, will not solve the trade deficit. What it will ensure is that relatively scarce U.S. Government resources—Gramm-Rudman has had an effect everywhere—are used most efficiently. That will have the effect of preventing foreign Governments from exploiting the differences in agencies as has happened and preventing the agencies themselves from fighting in ways which are not productive.

In summary, what you should have is an agency that has all the trade administration together and the ability to make trade policy in one place. Any President will inevitably have his own way of running trade in the White House and you might have to wait for the next Administration to have a separate unit there, but there is no point in waiting until later to have one U.S. trade policy agency instead of two.

Thank you.

Chairman GLENN. Thank you very much, Mr. Horlick.

Is there a specific trade policy today? Who makes it and what is it, if we have it?

Mr. HORLICK. U.S. trade policy is made, I believe, by the EPC, as I mentioned, and really comes out of a process that is headed by the Secretary of the Treasury—it does not have its own staff—and responds to specific agency initiatives.

I think there is probably a better model, if you will. It is in a book by a man named Roger Porter called "Presidential Decision Making." Mr. Porter worked in the Ford White House and the Reagan White House. Under his proposal you would have an "honest broker" in the White House with a very small professional staff who could make sure that all the necessary viewpoints were taken into account that a coordinated policy came about.

I think the EPC is a major improvement. Do not get me wrong. I think that that is responsible for the more aggressive attitude of the Administration starting in 1985, but I think it could be done better.

Chairman GLENN. When you were Deputy Assistant Secretary for Import Administration, did you have to spend a lot of time coordinating with the people over at USTR?

Mr. HORLICK. Well, yes, and I can give you specific examples now that I am not in the Administration. We had one view of what should be done with respect to steel and USTR had a slightly different view. I am not saying one was right and one was wrong, just that inevitably our resources were devoted to our view. We had 80 people working on it. They had four people working on theirs and did a very good job with it.

But, first, you should not have that duplication of effort. Secondly, a coordinating body should not have four people working on one industry. That should be done as one agency with a coordinator upstairs and the staff down below doing the work.

Chairman GLENN. If the EPC does the policy setting, how do you distinguish between their policy making and implementation? Is there something that falls into the crack there too often? What happens?

Mr. HORLICK. I think it is inevitable that you have USTR really responsible for carrying out U.S. trade policy in one sense, and the Department of Commerce having the resources to do it, and also responsible.

As you heard from the other witnesses, it is never going to be perfect because no Government ever is—but the number of cracks that are going to get fallen into can be reduced by putting everything in one agency.

Chairman GLENN. How important is the Office of International Economic Policy in Commerce to the trade negotiation apparatus in USTR?

Mr. HORLICK. Again, the ideal model right now is you have USTR tasking out tasks to, for example, that office. Inevitably if that office has other preoccupations—say the Secretary of Commerce has them doing something else—they are going to put a USTR request second. That is not because they are ill-willed or spiteful bureaucrats. It is simply what always happens.

So you have coordination. I do not want to say there is none. I think your bill would improve it substantially.

Chairman GLENN. Thank you, because what we would do is put this responsibility in one office under one Under Secretary for Industry and he would have responsibility for international as well as domestic economic issues and affairs.

It just seems to me that we can no longer differentiate between domestic and international economic matters, and I am glad you support that.

Mr. HORLICK. The U.S. economy is international now and that is unmistakable, for better of worse.

Chairman GLENN. Well, we may not like it but we can no longer be an isolationist Nation. We cannot just separate these things out.

Our cars are 25 percent Japanese, shoes are Italian and Korean. We ship hundreds of millions of tons of food all over the world. We are a global community now whether we like it or not, and that has happened in the last 15 to 20 years, basically.

Mr. HORLICK. And we need a Government structure that is updated to take care of that. A farmer in Nebraska worries about the weather in the Soviet Union as much as he does about the weather in Nebraska now.

Chairman GLENN. Exactly right.

Do you support the idea embodied in S. 1233 to reorient Commerce's mission toward marrying commercial and technology promotion activities?

Mr. HORLICK. That is getting a little bit outside my competence, but just as citizen, I think the Foreign Commercial Service, the promotional activity, goes logically within a trade body. Logically you would have one administration and maybe eventually a Department that would combine trade promotion and trade administration under one roof.

Chairman GLENN. How about the ACTA? You have heard us discuss that here this afternoon. Have you looked at that? Do you favor that or are you against that idea?

Mr. HORLICK. That I would rather not comment on. I do not know enough about it.

Chairman GLENN. Okay. The big buzz word these days is competitiveness. That is the magic word. You say competitiveness, it is supposed to cover a multitude of sins, I guess, and we are supposed to all address how we have become more competitive. Can you define the problem? What is your view of competitiveness and what we do about it?

Mr. HORLICK. Competitiveness is, I think in the United States more than any other country, a matter for the private sector and a matter for Government to work with the private sector to help, but it is going to be the private sector's job.

From what I hear from several clients of mine, the main force in competitiveness these days is General Motors and a lot of other big companies requiring their suppliers to supply better quality products at lower prices, and a lot of suppliers—some of whom I represent—have to work a lot harder to do it.

That said, clearly macroeconomic policy has been a major factor in American competitiveness. I do not know how any businessman kept his sanity while exchange rates over the last 6 years went up 50 percent and down 50 percent. That is something where a businessman can make the best product in the world at the best price in dollar terms and lose his competitiveness through nothing he did.

So, I would start with macroeconomics. Secondly, what you need is—this will sound trite—a coherent trade policy where the U.S. Government as a whole, and this implies a lot of coordination, sits down and figures out where it wants to go.

This is not easy. There are going to be priorities. You are going to have to choose, and there are some barriers that are worse than other barriers. Once you do that, you have to decide how to get there. You cannot do what we have often done for the past 10 or 20 years, which is to have a scatter-shot approach where we either attack nothing or attack everything.

We have to have priorities—they will not always be public—in negotiations, but you have to fix your priorities, figure out how you are going to get there, and then start taking the steps to get there.

One of the problems is, it is not going to happen, as this body knows, in 2 years or 4 years, but if you do not start taking the steps now in 2 years that will get you where you want to go in 6 years, in 6 years you will be starting all over again, and I think that is what we have been doing in our relations with countries like Japan, for example.

You will see the exact same rhetoric repeated every 2 years, and instead you have to think where we want to be 10 years from now. Let's say there is a barrier we do not like in a foreign country. We should plan out a strategy now and start pursuing it. That cannot be done without, in my view, a single Department that is operating with that goal rather than putting out fires.

One of the inevitable problems of USTR's special status is that it spends an enormous amount of its time putting out fires, and even though there are excellent people there, they do not have the time to think about where we should be in 6 years.

Chairman GLENN. Well, you mentioned macroeconomic policy and the runaway strength of the dollar, if you will. I do not think any trade policy would have overcome the dollar for the few years that we existed it. That is what happens when we get deficits the way we had and interest rates up and so on.

What we are talking about is a trade policy that will usually work, but in the abberations that have occurred the last few years, I do not think any trade policy would have overcome that kind of strength of the dollar, and it is debatable now that the dollar is back down how much of that market we are going to recover, how many of the markets will respond to a lower dollar.

So that is a whole different thing. I do not think we can really have a trade policy that takes abberations like that. They are too overwhelming.

Mr. HORLICK. Obviously, I agree with you on that, but a trade policy done in a coordinated fashion in an Administration inevitably is going to have to work with the people who are setting the overall economic policies.

Chairman GLENN. If we put in something like S. 1233, you have had experience over there—how long do you think a transition to something like this reorganization would take? We do not want to disrupt things for years on end, but could this be implemented rapidly, as far as you see it?

Mr. HORLICK. I think you could implement it fairly smoothly. You are dealing with existing organizations that do talk to each other. I am not claiming there is a rift between them. The goal is to eliminate the distance between them. Five blocks may not sound like a lot, but it is. I think it could be done fairly smoothly in terms of setting up one agency combining the functions you mentioned.

Chairman GLENN. We are all for reducing the size of unnecessary bureaucracy, obviously. The consolidations that we have proposed in S. 1233 would eliminate some duplication. Do you think that this would be a major saving of any magnitude?

Mr. HORLICK. To be frank, no. There would be some small savings, but the savings come from better efficiency and better use of the resources, not reducing the number of resources.

Chairman GLENN. You were one time the lead official administering the antidumping policy and you have followed the Japanese semiconductor cases, I am sure. Do you think combining enforcement functions with negotiation functions as laid out in S. 1233 will enhance the likelihood that in the future such agreements will hold up?

Mr. HORLICK. I think that, leaving aside the semiconductor agreement for the moment, just in general—right now the current situation legally is that antidumping enforcement is in the Commerce Department and as a legal matter under an Executive Order, policy in antidumping and countervailing duties is at USTR. This makes no sense. They obviously ought to be together.

If that split were remedied, I think that as a psychological matter, foreign companies and Governments will take more seriously the combined effect. I can assure you that there are times when USTR and Commerce have differed over, for example, the definition of a subsidy. This shows up in both section 301 and countervailing duty law.

There is no reason, in fact there is no room, for two agencies having two definitions of what is a subsidy. So I think in general it would be better to have them together. I think it gives more creditably.

One thing, foreign countries do sometimes try to exploit the fact that there are two trade policy agencies. There is a bit of what lawyers call forum shopping. On the other hand, I have also had foreign officials complain to me that they are driven crazy by going to two different agencies and getting two different stories.

But that is inefficiency, also. It is not efficient to have two different people talking to the same guy.

Chairman GLENN. No, it is certainly not.

I have no further questions. Thank you very much. We appreciate it.

Mr. HORLICK. Thank you, Mr. Chairman.

Chairman GLENN. The hearing will stand in recess subject to the call of the Chairman. Thank you all.

[Whereupon, at 4:25 p.m., the Committee was adjourned, subject to the call of the Chair.]

GOVERNMENT'S ROLE IN ECONOMIC COMPETITIVENESS

TUESDAY, JUNE 9, 1987

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 2:20 p.m., in room SD-342, Dirksen Senate Office Building, Hon. John Glenn, Chairman of the Committee, presiding.

Present: Senators Glenn, Roth, Bingaman, Pryor, Heinz, and Levin.

OPENING STATEMENT OF CHAIRMAN GLENN

Chairman GLENN. The hearing will be in order.

I apologize for the delay in starting. We are about 20 minutes late. I was giving a report on my recent trip to the Persian Gulf to the Democractic Caucus and it created some discussion so I had to stay for that. I am very sorry about the delay and apologize to all of you.

This afternoon marks this Committee's seventh hearing this Congress on Trade and Competitiveness problems, and the second one focused on S. 1233, the Economic Competitiveness, International Trade, and Technology Development Act of 1987. As I said at our hearing yesterday, this bill will serve as the foundation of the Committee's portion of the Senate's omnibus trade legislation.

As many of you know, one of the many topics that emerged in our earlier hearings was the critical link between technology development and this country's ability to compete in international trade. It is that linkage which underlies the purpose of this bill which provides a more rational trade and technology policy making Government structure.

Quite frankly, I have thought for many years that America needs to be more aware of the crucial role that technology plays in affecting our position in the global economy. Without it we would not enjoy the industrial and the military strength that we do today. If we do not continue to explore the outer reaches of our universe of knowledge, we will no longer have any claim to a position of leadership in the world.

I noted in the May 19 Washington Post, one of the things on scientific advances in that, that most of the 20 officials of American companies interviewed for the article expressed doubt that American firms will win a commercial contest with Japan to exploit superconductors. And later in that article, Humar Pattel, Director of

Research, Material Sciences and Engineering for Bell Labs at AT&T said, "I have a fear about this. I am sensitive to the fact that we as a Nation have done a lot about encouraging research and that we have not done very much about engineering applications," which are responsible for turning scientific discoveries into commercial products. That is the situation in which we now find ourselves.

The root of America's technology problem is not in our ability to conduct basic scientific research, but rather in our ability to bridge the gap between the lab and the marketplace. We lead the world in scientific discoveries and Nobel Laureates and we must pursue national science policies that enable us to maintain such leadership. But we have trouble transforming our inventions into mass-produced commercial products quickly and with endurance.

Examples are all over the place. For instance, the United States used to be the pre-eminent producer of consumer electronics. Today we are actually running a $13 billion trade deficit in the high-tech electronics field. To take two of the more glaring examples in this area, in the early 1960's the United States accounted for almost 90 percent of the color TVs produced in the world. Now more than half are made in Japan, and although the VCR was invented here, Japan now controls more than 90 percent of that market.

Our Government does not have a formally stated policy for civilian technology development and applications. For all intents and purposes we are the only major industrial country without one. I read recently in the Washington Post that a reporter following the superconductor story noted that he had to call scientists at six Federal agencies and the White House to get a full accounting of the $29 million now being spent by the Government on R&D in that field. Clearly, we need to change our seeming ad hoc policy of dealing with technological problems as they arise and move toward a more thoughtful lasting policy.

Yesterday, we heard from senior members of the Administration on S. 1233. I was somewhat dismayed to learn of their reservations with our efforts, whether in the trade reorganization area, or in the technology area. I must say that their reticence to change from conducting business as usual strikes me largely as a metaphor for precisely the problem we are trying to combat.

To return to the superconductor example, it was widely reported in the press that just 11 days after the February 16 announcement that American scientists had broken the superconductivity barrier the Japanese Government had organized a variety of councils to coordinate efforts by companies, universities and Government agencies to find commercial uses for the new superconductors. It is high time that we, too, develop a structure of Government that provides the ability to respond quickly and decisively in both trade and technology making areas.

I am delighted to have such a distinguished group of witnesses before us today. It is my understanding that Bob Strauss will lead off. Ambassador Strauss needs to leave by around 3 p.m. I believe, so we will try and do our very best to meet that time schedule.

Senator Roth, do you have any comments?

Senator **Roth**. I have no comments except to say I am always glad to welcome the guru on trade, guru on politics, and you name it, so I am looking forward very much to his testimony.

Chairman **Glenn**. Senator Bingaman?

Senator **Bingaman**. I have no opening statement. I am looking forward to the testimony, Mr. Chairman.

Chairman **Glenn**. Senator Levin?

Senator **Levin**. No opening statement.

Chairman **Glenn**. Fine. We welcome your statement, either in a abridged version or in its entirety. In either event it will be included in the record in its entirety.

TESTIMONY OF ROBERT S. STRAUSS, FORMER U.S. TRADE REPRESENTATIVE [1]

Mr. **Strauss**. I do not mind waiving an opening statement if you would like, and just start taking questions. Would that help you out?

Chairman **Glenn**. Could you summarize for us? That would be fine—make the major points.

Mr. **Strauss**. Well, let me try to get through it then. I have got about 10 or 12 minutes and I will cut it down if I can.

First, Senator Glenn, I am delighted to be here with you and the members of this Committee, a couple of whom it seems I have spent a lifetime with—Bill Roth and John Heinz. I have not been with others of you so much on trade issues, but we have worked together on other issues, and it is always good to be here.

I guess I am fortunate. My issues seem every now and then to come to the forefront, and instead of being dead politically, I get called upon for this kind of appearance, and I am pleased to be here. I do not quite know how to get into my testimony today to shorten it, but I want to try to.

To begin with I would say, however, that my views, and I think the views of most people who have given this a lot of thought, are pretty flexible with respect to just how this Government should organize itself.

You can make some pretty good arguments to proceed in a number of different ways, and I think we all have to clearly keep in mind that no amount of reorganization is going to be a substitute for sound policies and for people with talent and for a commitment to give the right priority to these trade issues.

I have views about a number of things that this Administration has done and done quite well, and I have been complimentary of them in those areas, and I have not been hesitant to speak out.

I am a good deal less complimentary in the area of trade. I think that the the Administration has neglected it and has not given it the right priority. The Administration would disagree. I think that is one of the problems we have, and if this Government had been organized a bit differently, I do not think it really would have made that much difference.

I would point out to you that we have had some extremely competent and effective people in these trade positions during the past

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[1] See p. 376 for Mr. Strauss' prepared statement.

6 years. You are just not going to get anybody any better than Bill Brock in the USTR office. And you have a first rate fellow in Clayton Yeutter there, a different type of man, different kind of background, different strengths, very good. And the Secretary of Commerce is just simply first rate. He is a man you can send anywhere and he will do a good job.

Their problem has been that the Administration itself has not given the trade issues a very high priority. We could have organized this one way or another but still, if you do not prioritize properly from the top you are not going to get anything done in these areas.

Now, the perfect answer may be that the priorities they have given are the correct ones: that trade does not deserve any more attention than it has received. I happen to disagree. I think that point more than any other point I would make is significant.

I would also point out that there are certain kinds of trade policy problems which affect producers and consumers in our country and in other countries and have a negative impact on the international trading system, and there are numerous and varied examples of this type, whether it is agriculture or telecommunications, intellectual property rights, or on and on.

These problems have to be attacked, and aggressively so, because they adversely affect both producer and consumer interests in the country. And in turn, they affect jobs and our overall welfare.

But let us never kid ourselves into thinking that these kinds of problems are the major cause of our trade deficit. They are just not. Separate and apart from these trade policy problems, there are economic problems that face this Nation and the world, and they desperately need attention.

It is these problems which greatly affect the performance of this country in the field of trade. And they are problems that are created by macroeconomic policies that need to be adjusted. There just are not any quick fixes to that.

I think that too often we want to blame the foreigners for all of our problems, and we want to talk about how if we reorganize we will solve those problems and come to grips with it. That is just not true.

Moving on, Senator Glenn, you mentioned the commercialization of products that we manage to develop in this country, and we have fallen behind terribly in that area, as you pointed out. The analogies you gave are both good ones. It is a complete lesson of what has happened to us. The Japanese have learned how to bring new products to the marketplace and bring them there more effectively than we have, and we are going to have to come to grips with that kind of problem.

We have talked about how and if we should consolidate trade policymaking in the Executive Branch. I have said here and elsewhere that now may be the time to look at an old idea that has been cast aside, and that is a Department of Trade.

I have been opposed to such a Department. I think most of the members of this Committee probably have. But we have always turned that down for the wrong reasons. We turned it down because bureaucratic jealousies kept us from ever looking at it properly, and if I were looking at this whole subject, one of the things I would do is strip away that kind of foolishness and take a hard look.

Maybe the time has come that we ought to look at that. I think the Office of Trade Administrator, I believe that is how you term it, which you propose in your legislation, is also worthy of strong consideration and ought to be looked at.

I would make a point—just a purely political point—I might have mentioned it to one of the people on your staff but I am not certain—if I were proposing trade legislation I would have it become effective, I think, if it was any kind of reorganization, on January 20, 1989. I think you would remove some of the tension from the air and you would de-politicize its discussion. I would think seriously whether they looked at this legislation or any other legislation of this type, and I would get it out of the bureaucratic infighting to improve the chances of passing something.

My judgment is the Administration is probably going to oppose most of the kind of legislation that we would come up with, and I say "we" because I associate myself so much with the Hill. I understand Administrations, Democratic and Republican, and I do not say that in criticism of this particular one. That is the way the game is played.

I would consider that effective date and let a new Administration get a new start, if you are going to have a new framework. It also lessens the tensions now.

I could make some other points here but I would be happy to take your questions now and see if we can save a little time.

Chairman GLENN. Thank you very much, Mr. Ambassador. I was very negligent in omitting for an opening statement Senator Heinz, who has taken the lead in trade legislation. He has been a leader on the Republican side in that area for many years. John, it was inadvertent and I apologize for overlooking you in the opening round here.

Senator HEINZ. Well, the last time I was Senator Roth. [Laughter.]

And Senator Roth would not stand for that this time.

Chairman GLENN. He objected.

OPENING STATEMENT OF SENATOR HEINZ

Senator HEINZ. Mr. Chairman, I thank you. I know it was an oversight, and I just wanted to say I am delighted to see Bob Strauss here. He has been of tremendous value to this country and to the Congress in the enormous contributions he made first in his capacity as a negotiator, and secondly as a witness before the Congress these many years.

We have seen a lot of him, and we hope to see, Bob, if you can stand it, we hope to see a lot more of you.

Mr. STRAUSS. Thank you.

Senator HEINZ. I would ask unanimous consent to put my opening statement in the record.

Chairman GLENN. Without objection.

[The statement referred to follows:]

PREPARED STATEMENT OF SENATOR HEINZ

Mr. Chairman, I regret I was unable to attend yesterday's hearing because I am interested in the reorganization questions and had urged the committee to hold these hearings. I appreciate your responsiveness to the concerns of many of us that your proposal be given full and adequate consideration before we act.

Having said that, I want to indicate I continue to have deep reservations about its merit—reservations I will elaborate on in questions to the witnesses. Let me take a moment, however, to reflect some areas of skepticism.

First, following the "if it ain't broke, don't fix it" school, I need to be convinced the current structure is "broke." I recognize the Committee has had extended hearings on that subject over the past 5 or 6 years, and I certainly don't suggest they be repeated. I do believe, however, that proponents of this proposal have the burden of providing its rationale. The chairman has done that with respect to the Department of Industry and Technology, but I remain to be convinced on the trade side. It seems almost that the reason for moving parts of the International Trade Administration is simply to get them out of the way of the new department. By itself that is hardly persuasive.

Second, a clearer case needs to be made for this drastic expansion of the Executive Office of the President and for the division of a currently integrated ITA into two separate parts.

Third, and perhaps most important to me personally, I am seriously concerned about the potential of politicizing export control and unfair trade case decision making in this new entity. To put it simply, placing these sensitive matters in the hands of our trade negotiators will subject the latter to enormous pressures from their foreign counterparts to "fix" cases in order to obtain agreement at the negotiating table. If recent experience is any clue, that pressure would be an irresistible temptation for some people in the U.S. Trade Representative's office.

I am not so naive as to believe our trade laws and export control programs have been administered with complete objectivity over the years. But that should be our goal, and we should surely avoid anything that moves in the opposite direction.

So, Mr. Chairman, I am not in concrete on the subject, but I remain to be convinced.

Senator HEINZ. I do want to make one or two observations with respect—and I have some questions for Bob Strauss on this when it is my turn to ask the questions—but with respect to trade reorganization as proposed in the legislation that the Chairman has, I tend to follow the notion of "if it ain't broke, don't fix it."

I really need to be convinced that the current structure is broken.

Mr. STRAUSS. You say you are convinced?

Senator HEINZ. I am not.

Mr. STRAUSS. You are not convinced?

Senator HEINZ. I am not convinced that in terms of the organization, leaving aside the issue of how we handle technology and transferring that between the laboratory and the marketplace, where I think the Chairman has made a good case that we do not do that as well as we ought. I am concerned about moving trade administration over to the umbrella of the negotiators.

I am particularly concerned because I fear that the negotiators, who have a very large number of responsibilities right now, will come under pressure, not from the internal politics, although they might, but from the outside, externally, from those people with whom they have to negotiate the next deal.

I think a clearer case has to be made on that. I do not want to see the export control function politicized by outside politics, and I do not mean Republican/Democrat. I mean what an LDC or a developed country that gets into a trade policy dispute with us might ask the negotiators to do in the application of the antidumping or countervailing duty or other laws.

So I am going to have a couple of questions on that, Mr. Chairman, when it is my turn, but I wanted to express my continuing concerns and, of course, one of the reasons you were kind enough to schedule these hearings is that you understood that people like myself did have some questions and this gives us a chance to air them.

Thank you.

Chairman GLENN. I sometimes put myself at the last of the questioning order and I would like to do that today. John, why do not you lead off? Take my time and then we will go right ahead.

Senator HEINZ. Mr. Chairman, I will be brief, because I think I really led up to the question, and it is this. You in your prepared testimony, Bob, have indicated that you do not think internal political pressures will be a serious factor, that it depends on the quality of the people. If you have got good people they will make the right decisions and be relatively immune from any but the most authoritative political pressure, which we all understand.

The issue it seems here is whether or not placing the trade administration function in the hands of the negotiators will or will not increase the pressure on them from our trading partners to make somewhat different decisions in the administration of our unfair trade laws.

What do you think the answer to that question is?

Mr. STRAUSS. I think you can argue it round or flat. It depends upon how you feel about the issue, Senator.

Senator HEINZ. There was a right answer to that question. [Laughter.]

Mr. STRAUSS. Well, let me tell you what I think about it. I think you can make a better case, or just as good a case, that if you give that negotiator some additional leverage, he will negotiate a hell of a lot better and stronger for you. I do not care who is negotiating for you. I have negotiated in the private and in the public sector for a long time and I think I know something about negotiation. I do not care how good a fellow is—if he does not have any cards in his hand, he cannot negotiate very well.

I would say that there is an element of truth in what I have said and an element of truth in what you said. As for me, if I were going out to negotiate around the world, I would like a little leverage and I would like something to trade with.

Senator HEINZ. Would you want to trade the calculation of an antidumping duty?

Mr. STRAUSS. Well, I just might. It would depend on what I got in return. I will tell you this, I had to trade off——

Senator HEINZ. I rest my case.

Mr. STRAUSS. Let me tell you this. I had to trade off, with your approval, some things that were important to some segments of the American broad economy to get certain other things. We traded off a little here and got a little there, as you recall.

We will take a State that no one here represents. Let's look at Kentucky. I recall we traded off some liquor interests there and took a lot of scars, and so did you, if you will recall. We did some things for tobacco and other things for that, and so it was a trade-off and that was the leverage we used to make that negotiation work.

So I think that argument is about as good as the other side.

Senator HEINZ. What you are arguing is, essentially, that you would like to see the trade negotiators have the flexibility to cut deals involving the administration of 301, or countervailing duty or antidumping, and I guess if I was a trade negotiator, I would want to have the same kind of authority and flexibility, too. It would make it easier for me as a negotiator, having as you say more cards, to succeed.

There is one major difference, of course, between what you were doing in 1977, 1978 and 1979 in the multi-lateral Tokyo round, and that is, you ultimately—and you did your homework so masterfully—you had to come back to Congress to get approval.

The major difference that I see in this proposal versus your experience, you had to come back and get the fast-track legislation adopted by the Congress, and you were very good about making sure that we understood ahead of time those tradeoffs. And you persuaded the vast majority of our colleagues on the Committees of jurisdiction and in the House and Senate.

Here there is not the same kind of reason for a trade negotiator to consult, because as I would see the pressures, there would be no immediate oversight role by people in Finance, or Ways and Means, or the Congress.

So, I think you have been very honest and accurate in your testimony, but it gives me, as a member of this body, cause for concern.

Mr. STRAUSS. I understand your point very well. May I just proceed for a couple of minutes and put this in a larger context? What I am going to say is sort of presumptuous and may be a bit arrogant, but I have been a bit arrogant and presumptuous before.

Let me tell you how I view this problem we have with the STR, and let me view it from my own perspective and my own experience. I would remind you, particularly, Senator Heinz, because you were a key part of this. When I spent 2½ years negotiating for the Congress and the Executive Branch around the world and with the Congress and between the Congress and the Executive Branch, I had a very unique situation that you are not going to get very often.

First, I had been around this town and I knew the Hill. My very closest friends in this town were both Republicans and Democrats, most of whom sat on the Finance Committee, as a matter of fact. And I had a close relationship with a President. I had a deep involvement in getting him elected. And I had a good relationship and influence with the White House staff. I had friends in the business community, from my work as a private lawyer.

When I came to the Hill and saw Bill Roth, I got damned near everything I wanted if I could convince him I was right. And the same thing was true with Russell Long. And then I could go to the President and get it.

The point I am getting around to making is that with all of that it was hell in the Administration because I was the STR and I did not rank as high in that position as the various Secretaries, and I was a bit of a gorilla for my job. It still was tough taking on the Secretary of State and the Secretary of the Treasury and the Secretary of Commerce and whomever else. And the only way I was able to do it successfully was because I could come to the Finance Committee, come to the Hill, and everyone knew that I had a strong hand to play within my own Administration.

Now, there are a lot of things I did not do well. Negotiating, by background and experience, I was well equipped to do, and I used those things.

Senator HEINZ. I do not know what it is you did not do well, and I think that the historians are going to have a tough time figuring that out as well.

Mr. STRAUSS. Thank you.

Senator HEINZ. Does that mean that you would favor transferring 201, 301 and 337 authority from the President to the USTR?

Mr. STRAUSS. I would have no difficulty whatsoever with that, and I would not fall out terribly if you did not do it. The point I am really trying to make is, what I would really like to see you do—and I do not know how you would do it—is to give STR a bit more clout when it sits down with the members of a Government if the STR is going to continue to have the major functions he or she now has.

Whether you do it by title, whether you do it by language, or whether you do it by responsibility, all of these things play a role in it. I do know if you walk into a room and you have 4 or 5 Secretaries of major Departments, it is a lot better to walk in if you are the one who has the responsibility instead of one among many. And that is the key point. How you do it, I do not really give a damn.

Senator HEINZ. At the risk of pressing a point too strongly, it seems to me that if you have the power as USTR to make decisions on matters that have ultimately a major impact on commerce or on economic policy, or on the State Department or on defense, as a USTR would necessarily have a good deal more of, if you had authority on 201 and 301 and 337 decisions, which USTR does not now have.

He may, depending on which Executive Order you are looking at, he may or may not have authority to even chair those meetings, all of those interagency review meetings, whether they are talking about the Trade Policy Committee or what used to be the Council on Economics and Trade.

It would seem to me by giving him that authority you would really strengthen him, because then the Cabinet officials one is necessarily in some competition with would understand where the real power lay.

Mr. STRAUSS. Let me state it this way and see if I understand what you are saying. It is my personal view that if the USTR had 301 and 201 authority, instead of the President having it, then he would walk into the room where the decisions were made and he—what I was trying to say—he would be the man with the authority. If there were five of them around the table, he would be the one that has the authority. When he walks in now the five of them are equal except he has a lesser rank and the President still has the authority, so his voice is going to be heard less effectively.

Now, let me go one step further. Let me give you another example. Bill Brock needed more muscle. This Nation would have been better off if Bill Brock had had more muscle and had had more clout, and I think that is a perfect example of what I am talking about.

Senator HEINZ. Bob, thank you very much.

Thank you, Mr. Chairman, very much for yielding me your time.

Chairman GLENN. Thank you, Senator Heinz.

Senator Roth?

Senator ROTH. Thank you, Mr. Chairman. Senator Heinz has raised a number of issues that I would have raised myself, but I would like to go back, Bob, to your opening statement that we ought to consider reorganization on the basis of the merits and not the bureaucratic feuding. Is not that itself one reason we need reorganization, that you do not speak with a consistent voice?

Mr. STRAUSS. I think there is no question that is true.

Senator ROTH. Then we have a two-headed monster.

Mr. STRAUSS. Multi-headed.

Senator ROTH. Multi-headed, yes, but maybe two principal heads, or at least theoretically; the Secretary of Commerce, the USTR, and of course, Treasury, Secretary of State, Agriculture and others involved as well.

So does not that mean that there needs to be some kind of consolidation within the Government of the trading functions?

Mr. STRAUSS. Well, I do not think that there is any question that consolidation would be helpful. I am not sure that mere consolidation is the answer, Senator. You are going to have the various constituencies continuing to weigh in very heavily, as they should, in the decision making process.

What I am trying to do now is to see that at least it is a fair fight, and I do not think the USTR is in a fair fight most of the time.

Senator ROTH. Let me ask you this question. How can we raise the prestige and authority of the USTR? I have long argued, of course, that by making him the head of a major Cabinet Department, or expanding the USTR, either one, that we would help succeed in doing that.

What concerns me is that in the case of the Treasury, because of the Treasury Department itself, I do not care who you appoint to that position, he normally is a pretty important guy in that Administration.

Mr. STRAUSS. That is right.

Senator ROTH. In contrast, in the USTR it depends very much on the individual himself or herself.

Mr. STRAUSS. And the relationship that individual has with the President.

Senator ROTH. With the President, exactly. And what I think we need to do is somehow create the kind of underpinning that will automatically give whoever has that position the authority, prestige and opportunity to speak effectively within the Administration. I do not see that happening now. I think it took 6 years for this Administration to sort of shake out who did what to whom.

Mr. STRAUSS. I share your view on both points, first, with respect to the reorganization, and second, that it has taken far too long for this Administration to get its act together in this area.

Senator ROTH. But what concerns me, having watched a few Administrations come and go, one Administration never learns from another.

Mr. STRAUSS. Nope.

Senator ROTH. And what worries me, comes 1989 we are going to go through the process. I do not care whether it is a Republican—as it will be, of course—or a Democrat.

Mr. STRAUSS. Well, I am not sure you will be able to tell one from the other the way things are going, Senator. [Laughter.]

Senator ROTH. But in any event, if you had all power and could do whatever you wanted to with the organization in Government, or let's say you wake up January 20, 1989 President of the United States—and that is not impossible—how would you like to organize the trade function?

Mr. STRAUSS. Well, to be very frank with you, I would probably do like other Presidents do. I would say, well, I am going to handle certain of these things myself and I am not going to fool around with taking the time and the effort to do any reorganizing. I am going to put a fellow over here in the trade job that I have confidence in. I am going to work with him constantly and give him all the damn power he wants. I am going to make it clear to the Secretary of State and the Secretary of the Treasury some things I want done and tell them to leave him alone while he and I get it done.

That is what I would probably do, and that is wrong. That is what Presidents do, and that is wrong. That is the way they organize their Government. You know that better than I do. And that is why, as you say, they never learn these things. They make the same mistakes.

If I had a magic wand, I would vest more authority and more power in the STR. I would move some of these things that Senator Glenn's bill moves. I do not really understand some of the technical aspects very well, not nearly well enough to have any fixed opinions on some of those things that he would move out of Commerce, and I would not attempt to express an opinion.

I repeat here what I said earlier in response to the Senator that it does not bother me to give the STR leverage to negotiate trade matters or to give him the tools. I like the idea of putting power in his hands.

I would probably consider strongly, if I were going to do those things, putting 301 and 201 in his hands. A lot of people will disagree with that, but I am 70 percent there, 75 percent there. I tilt strongly in favor of adding these remedies.

Both 301 and 201 are big policy numbers, and it gives STR a major lift that these other things do not give, and he would stride down the hall and make a lot more noise if he carried those in his pocket.

Senator ROTH. Let me ask you this question. When you were USTR and went to Japan or some of these other countries, was there any question in your mind as to who the individual who had primary authority for negotiating of trade?

Mr. STRAUSS. Senator, the theory is that you always knew who had the authority, but it, too, varied from country to country. You thought you knew in Japan, but you never really knew. When I was there, however Mr. Fukuda was very interested in trade, and he personally participated in those negotiations.

I talked television sets with Prime Minister Fukuda himself, and we discussed a few dozen sets more or less. He devoted himself to it. It is amazing, but that is true, even though he had a very strong negotiator. But, of course, you knew where MITI stood and the role they played. We do not have anything comparable to that.

Senator ROTH. Well, Mr. Chairman, my time is up. But it does seem to me that this is a problem that we ought to address. I am not necessarily married to a special system, but somehow it seems to me that trade is going to continue to be a principal challenge, a principal opportunity of this country, and that somehow we have got to be better structured to avoid the kind of infighting and lack of consistent policy that has been so typical.

Mr. STRAUSS. No question about it, and it is the simplest way to do it, when you think of the fact that you probably have a recalcitrant Administration. And if the next one is Democratic instead of Republican, it will be recalcitrant also. I am not making a political argument, as you were not either. But I think I would like to see the STR have more standing in court. That is what I would like to see him have as he went about the discharge of his responsibilities.

Senator ROTH. Thank you.

Chairman GLENN. Thank you very much, Senator Roth.

In order of arrival, Senator Levin.

Senator LEVIN. Welcome, Mr. Ambassador.

First let me say that I could not agree with you more that the basic problems that we have with trade have more to do with our budget deficit than with the organization of our trade function. Our tax policy, our lack of commercialization, a whole host of things which have made us less competitive, I believe, are more significant than where those boxes are on some organization chart.

Having said that, I think it is also important that we address the organizational structure, and you obviously do too or else you would not be here today. So, while it is not as important as those other things, we ought to address it.

Last year or the year before, there was a bill introduced by Senator Roth, which I cosponsored, which would have combined the Commerce Department, in effect, with the Trade Representative. We would have had a Department of Trade and Industry, or Industry and Trade, and it would have been one consolidated department. I thought there was a lot going for that. I still do.

I gather from your testimony that you think possibly its time has come, although you are not committed directly to that Department with a Cabinet-level head?

Mr. STRAUSS. Yes, that is correct. I would take a very serious look at it. I think the reason I say its time has come is because we are nearing the end of a second term and we know there is going to be a new Administration coming in.

We can follow the advice that I suggested of picking a starting date when you do not step on as many toes. That has the advantage of removing and lowering some opposition and I think we ought to take a serious look at it.

Senator LEVIN. By the way, I think that is sound advice, too, that we make the effective date after this Administration is over. I think it does tend to depoliticize it a bit, so I think that is also sound advice. My question though, is this. The bill which the Chairman has introduced goes at it somewhat differently, in effect. What it does is it takes the administrative functions, basically, for trade enforcement and adds them to a new U.S. Trade Administration—that is about 1,300 new employees—in the Executive Office of the President.

Now, I know you have said in your testimony that that does not trouble you a great deal. But I want to just give you some figures. The largest component we have of the Executive Office of the President at the moment is OMB, which has about 500 employees. All the other components of the Executive Office of the President are much smaller than that. This approach would add about 1,300. If the other trade functions of the Department of Commerce—mainly the trade promotions—were also added to the USTA, which logically I would think they ought to be, you are talking about 3,000 employees in the Executive Office of the President just in that one trade function alone.

My understanding of the Executive Office of the President is that it is more of a policy setter, not an administrator. Do you agree that we should try to avoid having, in effect, a Cabinet-level agency inside the Executive Office of the President, or does that really not trouble you at all?

Mr. STRAUSS. It troubles me somewhat, but if I thought it would improve the performance it would not trouble me that much. Numbers do not really mean that much to me because it depends on who the people are, who is head of it, and what kind of operation you have.

Senator LEVIN. I was asking more about function in terms of, is not the EOP more of a policy setter rather than an administrator?

Mr. STRAUSS. Yes, of course it is.

Senator LEVIN. And from that perspective, should we not try to look for alternatives? And here I go right back to that free-standing Department of Industry and Trade again, which would be a Cabinet-level office which would be in the Cabinet and therefore have the clout you seek for the trade function, but would not overload the Executive Office of the President with an administrative-type function.

Mr. STRAUSS. Senator, I suspect if you talked to a first-rate administrator—and I am not; I am one of the world's worst administrators and the most inefficient one you will ever find.

Senator LEVIN. Watch your pockets.

Mr. STRAUSS. I do not deny that I have at times been effective, but it was not because I was efficient. But there is a big difference between being effective and being efficient.

I do not know much about administrative charts. I have no background, no experience and no training. I have to rely on others who know more about that. I would say that if you had a strong STR, it would not make a damn bit of difference. If you had a President like a Lyndon Johnson who kept his hand on every darn thing going on all the time, he would be calling the third assistant to the third assistant over there and wanting to know why in the devil they had not sold ten rolls of toilet tissue to somebody, because he watched what went on in the Government that way.

He called the Internal Revenue Service to find out what they took in each day, how was business that day, and what was our collection. That was a different kind of President than what we see today, or many in between. We have all varying kinds, and this whole thing depends so much upon the cast of characters involved.

That is my point, and so the sheer number by itself does not disturb me. If you want to do it, do it.

Senator LEVIN. Well, if you have any additional thought on the function question in terms of the EOP, if not today, in the next week or so, I think it would be very helpful for us to have them, because I think we may be marking up, and frankly, we are in a quandary.

I think most of us want to consolidate those trade functions and strengthen the head of our trade office in some way or another. I think most of us would agree with that, and the real question is, where do we consolidate it most effectively? I think that is the dilemma we face.

Mr. STRAUSS. You know, Senator Levin, you talk about having any further thoughts, as if I had that magic wand and was going to wake up at a time when I could do something—as if in response to the question Senator Roth asked, I would get a couple of you fellows that are here today, a couple of fellows off of the Finance Committee, and a couple of people—three or four—from the Ways and Means Committee, with some first-rate staff people, and I would say to the Administration, do you want to come in and sit in with us or not? We have got about a dozen people here that are going off to spend a couple of days talking about reorganizing this Government.

I would not do it with hearings, I would not do it in the newspapers, I would not do it with Op-ed pieces, and I would not do it with lectures at Harvard. I would do it by taking a dozen people who have some understanding of this and who are earnestly well-motivated, representing both parties, and representing people who really give a damn, and by putting them in to discuss this for a couple of days. I would invite the Administration to participate, and if they do not want to, I would say, OK, boys, we are going to send you what we come up with, and you are making a mistake.

I would try to come out with something that this dozen people would agree upon. Until then, my judgment is that we are not really going to do very much.

I might take two or three people from the Hill that are in the private sector. I am not trying to work my way into the deal—[laughter]—but I know some people who could contribute to that, and then we might solve it.

Senator LEVIN. Mr. Chairman, that is all the questions that I have. I do want to commend both Ambassador Strauss and our Chairman for having these hearings, and particularly, I think today's hearing is going to be very helpful.

Chairman GLENN. Thank you Senator Levin.

Senator Pryor?

Senator PRYOR. Yes, thank you, Mr. Chairman. I do not have any questions for Ambassador Strauss. All I want to say is that, in fact, I was in another meeting and heard that you were testifying, and whenever you are on this Hill testifying, I am going to try to be there because I always learn something from you, Mr. Ambassador, and think all of us do.

Mr. **Strauss**. Thank you.

Senator **Pryor**. If I have any time left I am going to yield it to you to let you just keep talking, because I think we can learn a lot more from you than the other way around at this point. We are seeking answers. I think you know what we are trying to do. We all appreciate very much your knowledge and your willingness to share it with us.

Mr. **Strauss**. Senator, thank you. I am both foolish and vain enough to appreciate that. And I am sensible enough to know it is not all true. But I do thank you. [Laughter.]

Chairman **Glenn**. I think the points you made in your opening remarks that you chose not to give in full here—let me just run through them very briefly here, sir, and we will have the benefit of them.

The first point you made, I think, was that we should speak with one voice. You cannot speak with a forked tongue in these areas any more; we should be willing to take some actions in these areas; that Congress and the Executive Branch—which you have said here—have to work together, without that no policy is going to work, no matter how you structure it; that there must also be a political consensus; trade policy and domestic policy are inseparable, we cannot operate as though they are separable any more.

We have seen what happened with the strength of the dollar and so on, what that did to international competition and all of that sort of business. The number six point you made was trade policy cannot be made in isolation. It has got to involve business, agriculture, labor, management, the whole smear.

The number seven point you made was that there has to be reciprocity with our trading partners as far as working out these problems go.

Mr. **Strauss**. Correct.

Chairman **Glenn**. So I think that is a good agenda of seven items here that you chose not to stress in your opening remarks, but I wanted to make sure everyone had the benefit of those because I think they are all very valid and very important.

Just a couple of additional questions, if I might. During the time you spent when you were USTR, did you have to spend a lot of time coordinating activities with the people over in Commerce? Was that a major part of your time?

Mr. **Strauss**. Yes. It was not my own time, but I assigned that to other people. I did not have the time to do it. It was too aggravating, also.

Chairman **Glenn**. We think that some of that would be helped with this piece of legislation because it streamlines some of those activities and I hope would correct some of that.

Can you describe to us, when you were USTR, the difference between policy making and enforcement and implementation? Now that is a question that our bill addresses. We give the USTR more clout by putting the enforcement functions over there. You talk about putting some cards in your hand when you are sitting eyeballing your negotiator across the table, and it seems to me if you know that he is the person who is going to also be enforcing agreements, you are a lot more likely to take him seriously.

Now, how did this work, and I would presume from what you have said earlier that you think that would be a major quiver in his bow?

Mr. STRAUSS. Yes, I do. I did not buy Senator Heinz' argument. I think that he makes the case for the reverse of the point he was trying to make. Any time you give a negotiator an extra bit of power, you improve his negotiating talents immeasurably.

Chairman GLENN. You have looked at the problem of technology development first hand, on trying to negotiate things that got out of our control and went to another country. That has concerned me a great deal. I think we became what we are today in this Nation largely because of two things. One, we had universal education, and two, we plowed more of our GNP back into basic fundamental breakthrough research than any Nation in history.

Now, up until recent years, we were able to retain an edge because a product or process was invented here, it was used here first and then other Nations copied us and went on from there. Now we are doing the opposite. We may invent it, but that does not mean we are going to benefit from it in jobs, investment, business, and industry.

One of the things we try to do with this bill is to bridge the gap between invention and production and move rapidly—I will not say this is a counterpart to MITI—but it is the idea of being able to seize on a new idea and putting it into commercial application.

I do not know if this is a perfect solution, but if there are any suggestions you can give us along that line I would appreciate your comments.

Mr. STRAUSS. Senator, I think your legislation is striving toward the right direction, because we do need a change. I said earlier that I am not presumptuous enough to hold myself out as an expert at what ought to be. You have identified a very serious problem, and you have come forward with one or more of any number of solutions that might be appropriate. And who knows which would be the better.

To begin with, we talk in this country about not wanting to pick winners and losers, and we do not want to. But there is a big gap between picking winners and losers on the one hand and on the other hand tying in the efforts of Government and the private sector to work together to accomplish the very sort of things you are talking about, and we have not done that.

Now, we have a Private Sector Advisory Group in the Office of the USTR. It was mandated back in the old bill that Bill Roth helped write to set up this whole operation. That type of private sector operation could be woven in and used more to tie in the private sector along with the Government in order to get more done, not just in the field of commercialization, which I think is important, but also in research and development.

We are not doing that well.

Chairman GLENN. Well, what we do is create what we call ACTA. It is sort of a civilian DARPA, if you will—Defense Advanced Research Projects Agency—that some of our next witnesses have had some experience with—very much experience with—and what we do is, we say that, OK, there should be someplace that coordinates this sort of research.

Now, I want to make it very clear that you used the magic negative buzz words here, industrial policy. That is not too popular. We do not propose to pick the winners and losers and say we are going with this industry and we are going to let this one go down the tube, as some of the Japanese policies do, to use them as an example again.

So we do not want that kind of a structured economy.

Mr. STRAUSS. I understand that.

Chairman GLENN. We do think that where there are areas of promising research that we think can make breakthroughs in whole new areas, that that is where we should be supporting them, because too often private industry does not do that. And the President keeps saying, if it is worth doing, private industry will do it, and yet, that is not the way we have developed.

Mr. STRAUSS. I understand that. I commented on that in my prepared notes, and I attempted to make that point just now.

I understand that you do not do that, and you are moving in the right direction, in my view.

Chairman GLENN. Thank you very much. Any more questions from anybody?

Thank you very much.

Mr. STRAUSS. Thank you, Senator. I am very pleased and it is always with pride that I come up here, and I thank you for having me.

Chairman GLENN. You have been a big help to us and we appreciate it very, very much. You have been generous with your time. We did not hit your 3 o'clock deadline. Now you can go see Fawn Hall, or whatever it was you were going to do.

Mr. STRAUSS. I hope she has not forgotten me. Thank you, Senator. [Laughter.]

Chairman GLENN. Our next group is a panel, and we would appreciate them all coming to the table up here so we can have their testimony: Dr. Robert Noyce, who is Vice Chairman of Intel Corporation; Dr. Arden Bement, who is Vice President for Technology for TRW; Dr. Craig Fields, Deputy Director of Defense Advanced Research Projects Agency, DARPA that I mentioned a moment ago; and Dr. Robert Kahn, President of the Corporation for National Research Initiatives.

Gentlemen, we wish to welcome you to the hearing today, and I'm sorry I got things started a little bit late because of other commitments. We welcome you today, and we look forward to your testimony.

I will be glad to have a summarized version or your statement in its entirety, as you see fit. In either event, the statements will be included in the record in toto.

Dr. Noyce, we are glad to have you lead off today and look forward to your testimony.

TESTIMONY OF ROBERT NOYCE, PH.D., VICE CHAIRMAN, INTEL CORP.; [1] ROBERT KAHN, PH.D., PRESIDENT, CORPORATION FOR NATIONAL RESEARCH INITIATIVES; [2] ARDEN BEMENT JR., PH.D., VICE PRESIDENT FOR TECHNOLOGY, TRW, INC.; [3] AND CRAIG FIELDS, PH.D, DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (DARPA) [4]

Dr. NOYCE. Thank you, Senator.

As you said, I am in the semiconductor industry, and this is one of the sorely beset industries, even though it may be a sunrise industry.

I would like to talk about the two central issues addressed by your bill; namely, the technological development and trade. As has been widely noted, we are suffering from a decline in our international competitiveness. I served on the Young Commission, the Presidential Commission on Industrial Competitiveness. They pointed out that the industrial competitiveness really meant the capability of competing in world markets while increasing the real standard of living of our citizens. We are not doing very well on those.

One of the principal reasons for our lack of success on that is because we have a relatively inadequate level of productivity in technological development. American manufacturers have been unable to fund enough commercial R&D, and that has limited their ability to innovate and compete.

Most of the R&D spent by the Federal Government is really spent on programs that do not have commercial objectives as a primary concern. As a matter of fact, if we look at the real expenditures on non-defense R&D, since 1980 they have gone down 14 percent, according to the National Science Foundation.

Chairman GLENN. Would you give that figure again? What was it?

Dr. NOYCE. Fourteen percent, according to a recent report from the National Science Foundation.

Chairman GLENN. Of what? Basic research?

Dr. NOYCE. Non-defense research.

Chairman GLENN. Non-defense research.

Dr. NOYCE. Another one that has been pointed out again is that American firms have relatively high capital costs due to our budget deficit and our low personal savings rate. There is too little to invest in this country for proper commercial development.

We have long neglected commercial applications and manufacturing processes. Personally, I think that is because we have been investing our dollars where the return has been highest; namely, on the advanced R&D. Since the dollars were limited, we have had little to invest on downstream, but that is beginning to catch up with us.

Some of those barriers to R&D investment can be overcome through some institutional mechanisms. By this, I mean such things as pooling and applying commercial R&D funds, sharing the risks, sharing the down side.

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[1] See p. 387 for Dr. Noyce's prepared statement.
[2] See p. 399 for Dr. Kahn's prepared statement.
[3] See p. 412 for Dr. Bement's prepared statement.
[4] See p. 420 for Dr. Field's prepared statement.

Secondly, I think the suggestion of a Government agency like ACTA is very, very good because it has its primary focus on efficiency and commercial application; secondly, because of the swapping of people, it will be sensitive to industrial needs, and carry information back to the industry.

It minimizes the cost to the taxpayer because of the cost sharing and the recovery of the investments in that technology where it is successful, and I believe it is a necessary response to the institutional technology development programs of our national rivals; namely, countries like Japan or West Germany.

There have, of course, been efforts to do cooperative research by the industry itself. In the semiconductor industry, I would mention the examples of the Semiconductor Research Corporation, where we are pooling our funds to make grants to the universities to carry out appropriate basic research in semiconductor technology.

The second initiative which we are working on now is Sematech, which stands for Semiconductor Manufacturing Technology, to catch up on our weakest technological area; namely, the application of this new technology to our manufacturing processes.

We are hoping that we will get some Government support for that for a limited period of time, after which we would expect the industry to continue it on its own.

We also need to expand our export effort in our trade arena. We're not doing all that we can, and we could certainly do some more.

Your bill to reorganize the Commerce Department as the Department of Industry and Technology, particularly the office of the Under Secretary of Industry, I think will help us create coherent efforts to promote those exports.

Your proposal to strengthen the USTR was dealt with by Ambassador Strauss adequately. I share his views. If we can have people who are more interested in accomplishing something rather than worrying about how things are administered, I think we will all win.

But let me skip those comments and simply say to conclude that America can only meet the challenge of national competitiveness by intensifying its efforts to increase our technical development in the commercial sphere, and thus increase our exports.

I think your bill offers a sound way of accomplishing that. I would hope, too, that these Government efforts would also stimulate the private effort to increase the development activities to expand our trade.

Thank you for the opportunity of addressing you, and I will be happy to answer questions later on.

Chairman GLENN. Thank you, Dr. Noyce. I think we will run through all the statements first, and then we can have more of a discussion here.

Dr. Robert Kahn is next in line there. He is President of the Corporation for National Research Initiatives. Dr. Kahn, welcome.

Dr. KAHN. Thank you, Senator Glenn.

I would like to say briefly what the organization is because many people here may not be familiar with it. The Corporation for National Research Initiatives was formed as a not-for-profit organization in 1986 to provide leadership and funding for advanced civilian applications of information processing technology. In particular, we are currently working with industry and academia on research and development leading to a national information infrastructure both to stimulate economic growth and improve productivity. At the present time, our funding comes from research grants from industry.

For 13 years before that, I was with the Defense Advanced Research Projects Agency, DARPA. As Director of the Information Processing Techniques Office, we supported the largest computer research program in the country, and also proposed a strategic computing program to the Congress which is now being managed by some of my colleagues who are with me today.

I am pleased to have the opportunity to appear before the Committee and give you my comments on Senate Bill 1233.

The interesting thing about the organization that I head is that it was established as a private sector attempt to deal with some of the problems I believe you are considering in this bill. However, our area of technology is constrained to deal with only a very narrow area—the information processing field—although I think it is relevant to many of the other fields. Of course, we have to deal with a much smaller budget that is determined by the willingness of industry to voluntarily participate in very long-range cooperative investments.

This is really a challenging problem to deal with, and I think some form of Government assistance in the long term is really necessary.

The problem that you are dealing with is as much a problem of financial investment as it is of technological leadership. I think there is a need for something like what you are proposing.

You may recall we briefly discussed this area at Stanford during your visit out there in August of 1985. President Kennedy of Stanford had raised this topic, and this was also the first time I had heard you raise the issue of a civilian DARPA. This is a very natural follow-on.

Chairman GLENN. You followed on with that. Thank you.

Dr. KAHN. I plan to limit my remarks here today to that portion of this bill which I feel I can be most helpful about, and that is the part which deals with the Advanced Civilian Technology Agency, or ACTA. I have prepared a statement which I hope will be included in the record, and I would like to elaborate on that very briefly.

First, the problems of competitiveness, trade and technology in the global economy are really sufficiently complex that I believe no single action by itself is likely to provide a solution. Therefore, the committee may wish to explore many different avenues. I expect that a combination of factors may ultimately be required.

I think the idea of an ACTA to deal with these problems, characterized as a civilian counterpart to DARPA, could very well be one of these factors. I am personally supportive of the concept. In fact, I think the concept is sufficiently important that I believe it has merit independent of the disposition of the rest of the bill. I hope it does not get lost in the debate.

It is much easier to address directly the issues of stimulating economic growth and increasing productivity in this country than it is to ensure how the international marketplace will fare. I think the new agency, if created, can and will advance these first two aspects, and it is one of many approaches that should be explored to deal with the problem of competitiveness.

ACTA, as I understand it, would become involved in the four aspects of the civilian technology process. The first part is the process of creation or innovation, which typically takes place in the research laboratories. The transfer phase is really the second part in which technology moves from the research laboratory into products and services. The third phase is what I would call effective commercialization of the technology as we strive both to maintain and improve market share. Finally, I would point out a fourth area, and that is the development of the necessary infrastructure to support those first three areas.

I would like to extrapolate a bit from my own experiences at DARPA and, more recently, in dealing with industry on long-term R&D to identify some of the key issues that I believe should be of concern to ACTA. I will first list them and then briefly expand.

The first is maintaining a focus on important problems not otherwise being addressed in the civilian sector that are long-range, high impact and possibly high risk in nature.

Secondly, ensuring that the agency remains unbureaucratic and stays relatively small and dynamic and as free of the political process as possible.

Third, staffing it with the very best talent available with a relatively high amount of turnover in both people and programs—something like at least a 20 percent turnover and possibly higher each year.

Fourth, assuring direct congressional appropriation of stable and adequate funding to enable it to carry out its mission.

And, fifth, providing a close and meaningful coupling with industry in both planning and execution of the program.

Unless specifically motivated otherwise, there is a tendency for organizations to grow and, as you know, become increasingly bureaucratic; and if the organization is impactful, becoming increasingly entwined in the political processes. As an organization grows, it gets more vertical structure which impedes its ability to react quickly, and can generally stifle innovation.

Bureaucracy itself can take many different forms. Not all of it is bad; some of it is even necessary, but I think it is important to streamline the bureaucratic process as much as possible, minimize the paperwork to be able to issue contracts and otherwise deal with the problems it faces as quickly as possible. Its decisions ought to be made on the basis of the industrial opportunities and possibilities of success.

Ultimately, the success of this agency, I believe, will be dependent on the qualities of the people it hires. I think congressional involvement will be necessary to ensure that there is a stable budget and the organizational goals for long-term investment, high impact and risk are maintained. But it is also important that, along with risk, comes the acceptance that occasional failure is also okay.

It is very hard to attract the best people in high technology fields into Government today for many reasons, of which salary is only one factor. It is even harder, I believe, to create enough good career paths to motivate more than a few people in any given technology field to join the agency.

To make matters worse, I think that the agency, in order to maintain its very high rate of personnel turnover, is going to have to sustain a larger flow of new recruits than might normally be the case, but this flow is important to keep the agency program healthy and constantly regenerated. This, of course, makes the recruiting problem even harder and ensures that it will remain a constant and nagging problem.

There have to be adequate incentives for some of the best people to come into the Government, but nonetheless, I believe that there will always be some that are willing to join no matter what because the problem is just that important and the opportunities sufficiently high.

This area of staffing is the one that I am most concerned about in the legislation relating to ACTA. The use of qualified research and development organizations to assist is really an excellent way to deal with this problem. But I think it requires some very careful consideration in terms of structuring it to make sure that it is successful. I will come back to this in a moment.

Let me now turn to the area of industrial involvement which Dr. Noyce just mentioned. I think this absolutely must be handled adroitly and effectively for ACTA to be successful. In the case of DARPA coupling with the military, its counterpart here, this was effective, I believe, for several reasons. First, DARPA itself was a part of the DoD; therefore, it was able to use the military organizations to help both plan and execute the programs.

Second, military staff were assigned to DARPA for several years, and that enabled them to become part of the process and to carry back knowledge and experience to the military services.

Third, there was direct backing to cooperate right from the top of the Defense Department.

Fourth, many of the organizations in the private sector were attracted to participate in the DARPA program because of the nature of the national security mission and the fact that there was adequate funding for them.

Finally, I think that with DARPA in the military and having national security as its objective, it was and is in a very effective position to make things happen.

ACTA will be dealing with an equivalent problem in the industrial sector, but it will not necessarily have many of those same advantages going for it. First of all, it is not a part of industry as DARPA is a part of the DoD. Second, there is no analogous backing from "the top" to ensure the right level of industrial cooperation, although perhaps the involvement of the President could help along those lines.

Third, and perhaps most importantly, the problem that ACTA is attempting to deal with is essentially industry's problem, not one where the Government itself has the expertise, as it does in the area of defense and national security. I think we need to achieve the right coupling here.

The use of private sector R&D organizations to both help plan and execute ACTA programs is a very innovative and potentially a very effective way to help deal with this problem. The bill does not preclude Government R&D organizations—and I believe that they can help—but it also stipulates that ACTA shall make use of the expertise and the ability of private business concerns and R&D organizations in carrying out its work.

I believe this could provide exactly the kind of coupling with industry that DARPA achieves in its coupling with the rest of defense through the use of military agents for program management and procurement. There would have to be a mechanism by which private sector R&D organizations could be qualified to ensure that they are both unbiased, technically capable, and able, therefore, to act as agents of ACTA. This qualification process of the agents should be given great care, I believe, initially and on a regular basis, perhaps even at levels above ACTA.

This is an area which I believe would be of an interest to an organization such as the one that I head, but I am also sure that there will be other organizations that are very interested as well. Further, the likelihood is very great, in my view, that an organization like ACTA, if it operated this way, would stimulate the formal creation of new cooperative R&D organizations in the industrial sector in a fashion such that we have never seen before in this country. This might be an interesting and valuable enough experiment to run in its own right.

In summary, I think that ACTA can help to deal with an important national problem. I think that it would be highly desirable to give it a try. I would like to thank you for the opportunity to appear before the Committee, and I would be happy to answer any questions.

Chairman GLENN. Thank you, Dr. Kahn.

Dr. Bement is Vice President for Technology at TRW. Dr. Bement.

Dr. BEMENT. Thank you, Mr. Chairman.

Senator, it is not only an honor for me to be here, but as a resident of Ohio, it is a delight for me to be here this afternoon.

In reviewing the provisions of the bill, I felt that I should limit my remarks to the technology provisions since that is consistent with my background. And I focus on three issues in the written testimony which I will only paraphrase.

I should say parenthetically that you hit most of my points on the head in your opening remarks, so the best I can do is really embellish those remarks.

The concerns that I express really deal with our national technological strengths, the development of a coherent national technology policy, and also the importance of federally funded commercial technology.

Touching on the first point, national strength in technology, it is clear that technology is being recognized as a major competitive force in the world today. The fraction that the United States is going to be contributing to the world technology base in the future is going to be declining, not so much because we are investing less in absolute terms—as a matter of fact, we still, in total R&D as a percentage of gross national product, invest more than any other nation in the world—but because the rest of the world is going to be investing much more.

This means that we have got to take a much more open stance and a much more global position in scanning technology to keep from getting blind-sided.

Secondly, the equation for world power is also changing. Japan, which has only 40 percent of the gross national product of the United States, has only a weak military force and is dependent on the rest of the world for raw materials, is now considered to be one of the three most powerful nations in the world, primarily because of their share of world markets, their control of world financial assets, and also their mastery of commercially important technologies.

Japan today is challenging the United States for world technological leadership. I will quote some other figures. The estimate for our total Federal R&D investment last year was 73.8 percent for defense. By the time you subtract out health and space, there is not very much left for commercial R&D investment.

In contrast, Japan in 1983 spent 2.5 percent of their gross national product for commercial R&D compared with 1.9 percent for the United States. The projection is that by 1990 they will be investing about 3.5 percent, primarily because their stepped-up efforts to strengthen their science base, not only in their Government laboratories, but also in their major universities.

So unless we do something about the commercial leg of our Federal R&D investment, it is quite likely that in the early 1990s Japan will be out-spending us in absolute terms in commercially related R&D.

Now, I think the consequences of that are pretty serious. The consequences of losing very many events in the world technology Olympics can be quite serious. It can cause even a larger trade deficit in high technology products than we have today. It can intensify our continuing dependence on off-shore sources for the high technology products that we need to provide our military services with superior weapons. That can be a "morale buster", as you well know, in the future for our Armed Services. It can also cause a declining control of the high-leverage, defense technologies that we depend on for military advantage, and in time it could also lead to an erosion of our world prestige as a major power.

Going on to technology policy, our science policy in this country really got a major impetus with the Bush report to President Truman following World War II. So we have been evolving our science policy over a period of 40 years.

As you point out, our technology policy has been pretty much ad hoc and de facto since the mid-1970s because that is when our technology started to become seriously challenged.

Nevertheless, the policies that have been established have gone a long way in reducing the adversarial barriers between Government and industry, and they are marking a very positive contribution. However, they do fall short of the direct Government leadership and Government-industry partnership that exist in Japan for the development of commercial technologies in the civilian sector.

Some new models have been established to fill this need. We have now the Engineering Research Centers sponsored by the National Science Foundation, and the university-industry partnership programs being funded now by over 40 states. However, I would like to say parenthetically that competing with a highly integrated and a highly focused national capability such as we find in Japan today, and which is emerging among the West European countries, with 40 Lichtensteins, is not really an effective answer.

Frankly, some of these models are yet too new to judge their long-term impact on international competitiveness. Nevertheless, I believe that they do have a high potential for building capabilities, but I make a distinction between building capabilities and exploiting capabilities for competitive advantage.

Technology coming out of universities or even corporate central laboratories are pretty much raw technologies. One can argue that there is no risk in technology until you try to apply it. Once you get into the technology adaptation and integration stages, that is where the process gets very messy, where it gets very expensive, and where it takes time. That is where the risk reduction phase generally begins.

It is in this pre-competitive stage that MITI plays a national leadership role in Japan, and it is this capability we need to think about in this country in evolving our own national technology policy.

In looking at the importance of our Federal investment in commercial technology, I would like to merely call attention to our dual-use technologies which serve both our commercial and defense sectors.

The Defense Science Board in their 1986 summer study on the use of commercial components in military equipment called attention to several examples of where commercial products are currently being used in our military equipment. The list is long, ranging from aircraft, aircraft engines to microelectronics, computers, software and precision measurement equipment, advanced materials and so forth. Many of the so-called emerging technologies also show promise for military use.

However, we find that the commercial advances in these dual-use technologies, many of which are very important in developing, designing, and fabricating military equipment, have occurred offshore; and in some of these, Japan has assumed a world leadership position, especially in some advanced materials of high quality, low defect semiconductors, high density memory chips, optoelectronic circuits and some of the processing instrumentation and machine tools that are very important to our defense industrial base.

Furthermore, because life cycles are getting long for many of our military systems, we find that often commercial equipment reflects more modern technology because there are more cycles of development.

Furthermore, to build some of the low volume military equipment at reasonable cost requires a very broad commercial production base to support the defense production.

Therefore, a great deal of design and manufacturing in process technology really does transfer from the commercial technology base into the defense technology base, and that fact is oftentimes lost sight of.

Referencing the DSB study again, their study showed that considerable cost savings and reduction in lead times could be realized through the greater use of commercial components in military equipment. Furthermore, because the quality and reliability of many of these commercial components have increased greatly over the years, there is not a great deal of difference, except in the final packaging and reliability testing. In some equipment, it is primarily the cocoon around the equipment that certifies it for military use.

Furthermore, the Packard Commission stressed in their recommendations in defense acquisition that more commercial components should be used in military systems, and that the specifications should be generalized to make that happen.

The major point here is that we need to arrest the continuing displacement of our dual-use technologies offshore, and that we need federal attention to policies that will strengthen the commercial leg of these dual-use technologies in ways that will stimulate technology flow from the commercial to the defense sectors.

Now, I would like to comment on the bill itself. I believe that the bill, Senate bill 1233, does address these three major concerns about commercial technology. And for that reason I support the bill.

I think the establishment of the Office of the Under Secretary of Technology has several desirable advantages. I think first of all we need higher level executive leadership in rebuilding our Federal support for commercial technology. This has to happen at higher levels in Government.

Also, technology policy in isolation is not a very effective policy. It needs to be coordinated and the impacts on trade, economic security and foreign policies understood in terms of North-South relationships, East-West relationships, and especially relationships in the Pacific Basin. While this may be effectively coordinated, at a sub-Cabinet level, it cannot be very well done at a sub-sub or a sub-sub-sub-Cabinet level.

Improving the synergy of coordinated management of the major technology elements of the department, I think will reap benefits, especially in forecasting important emerging technologies, and also improving foreign scanning of technology developments abroad.

I think improving the mission of technology in the department will also enhance the potential of attracting top technology management talent from industry.

Dr. Kahn talked about ACTA. I think it is a provision that is worth looking at. However, I have some concerns about the roles and responsibilities of the program managers. I think you could structure an ACTA that would look just like a DARPA, would be administered just like a DARPA, would even have the budget of a DARPA, and yet it would be a different agency, primarily because in the Defense Department you have very effective and powerful ways of developing consensus. It makes the operation very efficient.

When you start looking at an ACTA, you're dealing with the whole universe outside the Pentagon, and that is a very messy universe, very difficult——

Chairman GLENN. There is also a little different consensus requirement, too.

Dr. BEMENT. Different consensus, much more political.

On the other hand, Japan has to deal with that problem as well. The question of who chooses is pretty much left to industry, and the program managers in MITI pretty much serve as facilitators. The process works in that manner, and I suspect it would work the same way in an ACTA.

I think there is a question of the flexibility and the authority that ACTA program managers would have in qualifying and selecting the R&D operators that will implement the programs. I think they do have to be given a fair amount of authority so they can be the principal architect for the implementing mechanisms. Otherwise, it will become highly defocused, very inefficient and highly politicized.

The question of accountability standards for returns on investment also is a problem, especially when you are dealing with high-risk, high-return concepts and prototypes. Oftentimes, these returns are delayed returns because it takes 3 to 5 or more years for those returns to even be measured, let alone realized. That is a time schedule that is going to be longer, I think, than the average tenure of a program manager if the organization is going to be kept dynamic. I would recommend 3 years as perhaps the maximum term of a program manager in ACTA.

How do programs get successfully transferred to the private sector? This is a problem, has been a problem in DARPA; at least it was when I was there. Maybe it works easier today, but I think it is going to be a very difficult problem for ACTA as well to cut that umbilical cord at the right time.

Furthermore, I think programs need to be terminated in a timely way to allow competitive forces to move and operate most efficiently. It is one thing to start the game when all the horses are at the starting gate. It is another thing to continue it or even start programs when the race is pretty well along and you already know who the winners are likely to be. It is at that time that the competitive forces should take over.

There is also a question of sufficient program turnover for the kind of resources that have been identified for ACTA in order to keep ACTA dynamic, to ensure that resources are available for new concepts that come along, and also to scale up programs that look terribly exciting.

As I look at the amount of resources that have been identified in the bill, they are essentially a fraction of a Sematech. I think you are going to need about eight or nine Sematechs in this kind of an agency in order to hit all the exciting areas.

Chairman GLENN. I want to talk about that a little bit some of the things you are doing on that a little later on.

Dr. BEMENT. I have touched on ACTA. I think it is also very important in the Department of Commerce that attention be given, especially by the Under Secretary for Technology—in fact, I recommend it be a special role—of improving the ability of U.S. scientists and engineers to scan foreign developments abroad.

I have a number of recommendations in the written testimony. I will not touch on those very much except to say that in NTIS now the resources that are allocated for foreign acquisition of technical information is very small, compared with the fraction of the world technical literature that is generated abroad. I think that has to be rebalanced. There needs to be more resources provided for foreign information translation and evaluation.

Also, to keep from using a vacuum sweeper approach, I feel there need to be established international assessment centers at universities and the national laboratories, not only to determine where efforts should be focused in acquiring foreign technical information, but also to do some assessment and to incorporate the results in timely technology reviews that are available to the science and technology community at large.

Finally, I would hope that the strengthening of the technology role for the proposed Department of Industry and Technology will lead to a much better recognition than exists today for the critical role that the National Bureau of Standards plays to our national productivity and competitiveness. The application of measurement science, basic measurement standards, and evaluated data is really at the heart of our Nation's ability to produce high quality and highly reliable products and to compete in the world marketplace today. And with the rapid acceleration of new technologies, the NBS will have an ever increasing challenge to develop those standards and evaluated data bases needed for proprietary applications of those emerging technologies. Hence, I believe the role of NBS should stand at the center of Government technology policies for international competitiveness.

Those pretty much conclude my remarks. I see considerable merit in your proposed bill for hitting the three concerns that I have, improving our international competitiveness and strengthening our international trade. Thank you very much for the opportunity to make these remarks.

Chairman GLENN. Thank you very much.

Now, Dr. Craig Fields, who is Deputy Director of Defense Advanced Research Projects Agency, DARPA. I believe, Dr. Fields, the last time you were before us here, you were a member of the audience. We saw you there and wound up with you at the witness table even though you had not come for that purpose. We welcomed your testimony that day, and we welcome you back again today.

Dr. FIELDS. Thank you very much, Mr. Chairman.

Before I begin, I would like to introduce one of my colleagues from DARPA who came along today: Dr. Clinton Kelly. Dr. Kelly is the man who is currently running the strategic computing program that Bob Kahn referred to, and he is also beginning our new activity in manufacturing technology.

Chairman GLENN. He may join you at the table, if you like. That would be fine.

Dr. FIELDS. During questioning, that is probably appropriate.

Chairman GLENN. Fine.

Dr. FIELDS. What I wanted to do today was to talk about DARPA: how it was formed, some of the things that it has done, and how it works. You have often referred to the proposed agency ACTA as a civilian analog of DARPA, and I think there are some lessons to be learned.

As I am sure you remember, in late 1957 the Russians launched the satellite called Sputnik, and within a few months thereafter, the Congress took a number of decisive actions, one of which was to establish the agency then called ARPA, which has now been renamed DARPA. But it is the same place.

The charter of the agency said that we were to pursue high-risk, high-payoff research to keep the United States from being technologically surprised. At the time there was a tremendous feeling of urgency about getting into space, and so our agency was termed the Manhattan Project for space. It was given an initial budget of a little over a half billion dollars, which our accountants at DARPA calculated is the equivalent of $1.8 billion today. So it was a rather formidable budget for the time.

Well, things worked pretty well. Within a short period of time, DARPA had gotten the United States into space. We launched and were responsible for all of the early satellite technology and many of the early boosters. You remember Tiros and Notus and Courier and Score and Transit, weather satellites, communications satellites, navigation satellites, Vanguard, Explorer, Saturn launch vehicles. I wish we had Saturn now, as we all do.

We also were responsible for some of the earliest work in ABM: Project Defender which ran for a number of years and contributed a great deal of fundamental technology and faced some of the same challenges now facing SDI.

Incidentally, when SDI was formed a few years ago, a kernel of that activity spun off from DARPA, a major part of our agency, a little less than a third left, people, programs and so on, to help them get going.

We have also been responsible since our founding or a few years thereafter for developing the technology to support nuclear test ban treaties, the nuclear tests. We have developed and operate the arrays of seismic detection devices now in China and Norway. We have done a great deal of work in tactical technology, primarily starting in the Vietnam era, among other things developing the M16 rifle.

I want to concentrate today, however, on those technologies that Dr. Bement referred to as dual-use technologies, those that are relevant both for the defense sector and the commercial sector. We have had extremely strong programs in both computer science and materials science. Dr. Bement headed materials science work when he was at DARPA. As you heard, Dr. Kahn headed computer science work.

From the computer technology area, we have developed things like time-sharing and computer graphics, the ARPANET and packet-switched communication technology in general; the earliest computer-aided instructional systems like Plato, many pieces of office automation technology, large and small, including at the small end the mouse that you find on your Macintosh computer; teleconferencing technology, new multiprocessor supercomputers. In fact, the strategic computing program was a program that we started because of the needs in the military for advanced computing technology. Many members of the Congress supported it because they viewed it as an answer to the Japanese fifth-generation program. We have developed a number of advanced multiprocessor supercomputers that could be termed fifth-generation computers—it is a vague term, of course—including one, the connection machine which has 64,000 processors, and in its most recent incarnation is easily the fastest computer in the world. We are very pleased with those activities.

We also were responsible for a great deal of the early work in materials science, and in particular found that 12 so-called interdisciplinary laboratories, which I believe identified that field as distinct from physics or chemistry, those laboratories were renamed and transferred later to the National Science Foundation where they form a core for their program.

That activity has given the country, both defense and the commercial sector, a great number of things in alloys, microelectronics, composites and ceramics, polymers, biotechnology. We have a very exciting new program in the high temperature ceramic superconductors. I know you referred to that in your opening remarks. We could get into that if you like. And we are also concerned about the problems in the semiconductor industry, and hence have a new activity in semiconductor manufacturing technology.

The materials science work is not quite as flashy in some ways as the computer science work, so it is a little hard to find it. But spinoffs from our activities seem to be everywhere: automobile drive shafts and springs; tennis rackets and golf clubs, diesel engine piston lines and valve seats and electronic ceramics, electric motors, power transformers. There is a lot out there that came out of DARPA work.

To summarize this part, I want to say that DARPA has a lot of different faces. One face is that we respond to the President with initiatives like the National Aerospace Plane; another is that we provide academic support, particularly in computer science and materials science, in a very solid way. We also do a lot of advanced weapons development, weapons sensors and platforms for the military; and lastly, this issue that I have raised of spinoff technology, dual-use technology.

We try to do—it is our job, it is my job—what you said; namely, bridge the gap between an idea and something practical, something useful—a realization. In doing that, sometimes we respond to markets; sometimes we create markets.

I want to say a few words about how DARPA works, because that is really very important. I have divided that into three sections: one is concerned with the procedures we follow; a second, people that work in DARPA; and, thirdly, the environment in which we work.

In discussing the procedures, I should warn you that we do not follow the textbook. A lot of the things that we do are probably forbidden by first-year courses at business school, but they seem to work pretty effectively.

The central thing at DARPA that we all are concerned about are programs. Programs are based on technical ideas, new insights—new insights that are not pursued by others. Sometimes those ideas come from small start-up companies; sometimes by a maverick individual in a large company; sometimes they are invented by DARPA program managers. It does not matter. Every one of our program is supposed to have a new idea, and that is critical for success.

One of the nice things about our charter is that it not only allows us to work in any area that seems appropriate, but it does not require to work in an area if we have no good ideas. That is very important.

For our programs, the evidence of success is technology transfer. The evidence is not a laboratory demonstration. That is a burden on the program manager, and they understand that. That is one of the conditions under which they work.

We are concerned only about having large impacts, so we do not pursue programs, we do not pursue ideas that can make small evolutionary improvements. We do not have enough money to do everything. We have to be very selective.

As Bob said earlier, our program managers are given the opportunity to fail. In the technical area of decision analysis, there is a good distinction made between good decisions and good outcomes. Sometimes you can make a good decision and have a bad outcome, a failure. We understand that distinction. It is very important.

We take an active role in our programs. We assemble industry teams, industry and university teams, involved the national labs. That is what the program managers do.

We have no laboratories ourselves. Everything is done by contract. We get the very best people at the time, and we can switch back and forth, depending on the needs of one year versus another.

We have good, close links with our customers: the military services, the CINCs, the defense agencies, the intelligence community. In pursuing individual pieces of a program, sometimes we have cost-sharing, sometimes we do not. Sometimes we joint-fund things, sometimes we do not. It depends on what makes sense in the particular cases.

We are very sensitive to issues of intellectual property, to protecting the proprietary information of the industries that come to us with their ideas, and of protecting their patent rights within the guidelines of Government and DoD procurement regulations. We want to do that because we try to encourage follow-on investment—let me call it lower risk investment—from private sources.

On the other hand, we are also concerned with helping not just individual companies, but also whole industries or segments of industries so we can have multiple sources for defense. So we encourage licensing arrangements that will open things up for a segment of an industry.

The organization is very small. Our budget request for next year is about $830 million, and there are only 75 scientists and engineers that work at DARPA. Most of them, quite a large number, have Ph.D's. It is a very flat organization. There are only three levels, and it takes between one and three signatures to get something done. That is very important.

We can respond very rapidly. When the new superconductors were discovered, within a short time we were able to redirect a number of our contractors in ceramics manufacturing to work on the new material. We were able to start about a half dozen new efforts, and we have a very large procurement now under way—that is industry-oriented, I might add—that is being handled for us by the Office of Naval Research. We can respond quickly.

There is very little paperwork in DARPA. I have stayed at DARPA a long time, and so given that perspective, I want to say that there is less and less paperwork every year, unlike any other place that I know.

We had some contracting problems a few years ago, but I think that we are over that now thanks to the aid of the Congress and the use of Broad Agency Announcements for the work that we do; and, frankly, also because we have started our own contracting shop stimulated by our new mission in prototyping, which also came out of the Packard Commission.

Next, I would like to turn to the people who work at DARPA. That is the most central issue. The people at DARPA combine three characteristics that you normally do not find in individuals. Number one is they are good scientists and engineers. People in our agency are frequently asked to give speeches at international conferences, not because they work at DARPA but because of their own work, the things that they have done as contributions to their field.

Secondly, they are good managers. They know how to marshal resources and organize in order to get something done. They can go beyond just the initial idea and bring things to some realization.

Lastly, and perhaps most importantly, is they are entrepreneurs. They have a tremendous energy level. They are tremendously dedicated to success, and I believe that they have the most powerful and important jobs in our agency.

Our agency is peculiar in a number of ways. Almost everyone makes the same salary—namely, the top Government salary—so people are not worried about getting raises. Almost no one is ever promoted, so they do not spend a lot of time worrying about getting promoted. Most of our program managers are tremendously overworked, so they do not spend time trying to build empires at the expense of their colleagues. All of these things seem small but they are really important, and they lead to success in the organization.

There is a lot of turnover, rapid turnover. Three or 4 years is the average at DARPA. People come to our agency from everywhere, including industry. Typically, they go to industry after leaving DARPA. They come because they want an opportunity to get things done, and they want to be visible in getting something done. Thus, it is important that we give them the opportunity to make decisions; they have to have authority. You do not find many committees around DARPA. If they could not make decisions, they would not come to work there, and they certainly would not stay. Very important.

The last of these three areas I wanted to raise—namely, the environment—I wanted to say that we have very good relations with the services, with the Secretary of Defense and the Under Secretary for Acquisition and, I am happy to say, with the Congress, both sides. We have a reasonably stable budget. We do not have too much micromanagement from above, and we get good support when there are technical controversies.

I would like to end by a quote, perhaps incorrect, that is attributed to Johann Sebastian Bach. I am sure you know that he was a great composer, probably the greatest that ever lived. But he was also a great organist, and he was once asked by someone whether it was difficult to play the organ. He is supposed to have said, "No, it is not difficult at all. All you have to do is hit the right notes at the right time." Well, that has a lesson for starting ACTA. There is no fundamental reason why it cannot be a very effective organization. You just have to do everything right.

Thank you.

Chairman GLENN. Thank you. Every one of your presentations was very interesting.

Let me follow up with you, Dr. Fields. You have a single client, or a single sponsor, if you will, that you are answerable to. While I think that ACTA can work, I have not had a feel for whether in the broader scope of things in the civilian economy, some of the DARPA methods were as transferable to ACTA as we might like.

I admire DARPA's way of getting things done, the fact that you have three people over there, and somebody decides something is going to get done and it does get done. You do not have to have a committee to read step one. You are answerable to the Secretary of Defense, and that is about it.

I am not sure on ACTA that we could get by with that lean and mean a group just making decisions. I would appreciate your comment and anyone else's on how we create this—I want to make ACTA as efficient as possible. I am not sure it can be quite as lean as you have with DARPA.

Dr. FIELDS. Well, first of all, I think you are right. I have spent some time talking with your staff about that issue, and ACTA cannot be a mimic of DARPA. I raised these lessons so that you could pick up the right points and the best points. I think that the bill is a reasonable one.

I would really like to turn to my colleagues, though, to answer that because I think they have given it thought in a different way than I have.

Chairman GLENN. Anyone else care to address that?

Dr. NOYCE. One of the concerns we have had in Sematech and possible Government funding of that is the level of micromanagement that might be applied by the Government. We would like to see in any of these projects the ability to get things done by those who know what needs be done rather than from other influence.

I think that is going to be a very sensitive issue on ACTA.

Chairman GLENN. Dr. Bement?

Dr. BEMENT. Well, it occurs to me that there is one other feature of an ACTA that also needs to be taken into account; that is, that the resources are going to be highly leveraged in the sense that instead of paying the total cost of the R&D development, it will be leveraged against the contributions and the investment by industry. In that sense, the Golden Rule applies, and whoever has the gold is going to make the rules. So it will probably operate in a more reactive mode than a proactive mode.

Also, I think other problems are going to creep in in terms of how to handle intellectual properties. I think anyone that operates in the defense community pays less attention to that; whereas, in the commercial world, ownership of intellectual properties is going to be a very major proprietary, competitiveness issue.

Those issues, I think, will protract the time it is going to take to develop programs, get programs organized and to bring together a consortium of industry in order to get programs started up. That is not to say that it cannot be done efficiently. It just has got to be organized somewhat differently than the conventional way that these programs are carried out in DARPA.

Chairman GLENN. Dr. Kahn?

Dr. KAHN. I think the formation of these research consortia and other groups, of which Sematech and MCCs and SRCs are merely examples, is not really a historical accident. I think they represent the natural forces within industry to get together to work on problems that they perceive to exist in common. I think that this is a mechanism that can serve as a very good focal point for getting industry consensus on kinds of problems that needs to be dealt with so that that kind of input can be drawn into ACTA.

That does not mean that ACTA ought to rely on them exclusively, but that is a way to get this kind of coupling. As I mentioned earlier in my remarks, there may be some problems that require the kind of leadership that only a President can provide to really break through the kind of intransigence that can often take place when you have multiple parties with different and competing interests.

Chairman GLENN. Should ACTA be involved in prototyping or carrying things that far? Do you think you have to take it that far to show the applications of it, Dr. Bement?

Dr. BEMENT. Yes, sir. I think it does. There have to be built into almost any program some intermediate and final examinations. There have to be some built-in hurdles and in some off ramps.

Oftentimes, the best way to transfer a program is just to cut the funding and see where it goes. This is the way we transferred what was then the interdisciplinary laboratories to the National Science Foundation. We just threatened to cut the budgets. The universities then convinced NSF that they should continue the program.

It was also the way we transferred the ceramic turbine program from DARPA to the Department of Energy, just threatened to cut the program, primarily because we could not find adequate sponsorship within the military departments to transfer that program internally.

So I think the building in of prototypes to actually demonstrate technology in a system or an integrated context has to be a part of risk reduction process of proving out commercial technologies. Otherwise, you stand too much of a risk of just carrying on sandbox-type activities in an open-ended fashion without getting any closure.

Chairman GLENN. Maybe we are faced with a situation right now—it is almost a classic time that we are having these hearings or that we are having this type legislation proposed—in that all at once superconductors are the foremost, hottest thing we talked about when you were here before, Dr. Fields. Even the implications or what directions this may go in and the impact it may have on us over the next generation are so enormous they are almost hard to imagine, in areas of energy storage and just a whole host of things that may come out of this.

Now, we are right at the ground floor. We have just made the first breakthroughs in this area. There are going to be dozens more in years ahead as we increase the temperatures of superconduction and as we do a lot of things to discover new uses for this capability.

It would seem to me that we are at the ground floor, and we can use this technology and its development as a case study on how we should organize to make sure that we are set up to really implement this thing and move out with it, whatever occurs. We have just made the first tiny little door opening, foot-in-the-door breakthroughs now. There are going to be more of them coming. In fact, they are coming.

What can we do to organize to really take advantage of this? Some of our competitors around the world are just lapping this up and are apparently organizing Government, industry, business, investment and everybody else to go. Now, we have a different form of Government here. We have some different constraints that maybe limit us, but I would appreciate your comments as to what you would see as an optimum way of how we should organize. What can we do as Government? Or should we do nothing?

The options are to do nothing to taking over the whole system as a Government program. In between, there is some balance we should try and hit, and I am sure willing to try for that balance. What do you suggest?

Dr. BEMENT. Well, in addressing that question, Senator Glenn, I would like to make a distinction between factual knowledge and procedural knowledge.

Chairman GLENN. Factual and procedural. Okay.

Dr. BEMENT. Factual and procedural. Since this discovery occurred, the number of scientists working in high temperature superconducting materials in this country has escalated from a few hundred to a few thousand almost overnight. Part of that is due to prior year investment in the field of superconductivity by the various funding agencies in the country, where scientists have sort of come through the research process in the field at some time or another.

A lot of this has occurred by reprogramming, as Dr. Fields pointed out, so what you find is there are a lot of fragmented, parallel efforts going on in many research laboratories throughout the country.

On the other hand, in a relatively short period of time, the crystal chemistry of the material has become understood. The properties are becoming pretty well understood, although some of them have to be refined; that is, the measurements have to be refined. Also, the theory is also becoming fairly well understood. That factual knowledge is now being distributed throughout the world, through published papers, very rapidly.

I might point out parenthetically that the first discovery occurred in Switzerland based on earlier work in France. It did not occur in the United States, unfortunately. However there was work being done in this country that allowed us to exploit the discovery very quickly.

Now, the procedural knowledge that I am referring to is really the knowhow of putting this material in various forms, devices and types of equipment. This engineering work is going to take months, if not years. These breakthroughs will come along much more slowly. Plus the fact the engineering community is not really organized yet because not very many engineers, except in the national laboratories, have been earning a living in superconducting technology over the years.

On the other hand, these developments could also because very fragmented, and appear to be becoming very fragmented at the present time. So the question is not only getting focus, so that there can be more cooperative efforts in order to conserve the total amount of R&D resource available, but in many cases, reducing the number of parallel paths that are not likely to be very productive. That is, to operate in more normative ways rather than highly parallel ways. You will have to do some things in parallel, but you should not make it an art form.

It is getting that critical mass and focus in the early stages that I think will make it a horse race with what is going on in Japan and what is likely to be going on in other countries.

Chairman GLENN. Well, if you were sitting in my chair here, would there be any legislation you would be proposing knowing that we are right at the infancy of this new science and technology? Or would you let things go as they are?

Dr. BEMENT. No, I think there is enough in the books right now that will provide the needed latitude and flexibility; for example, through the Stevenson-Widler Act and through partnership provisions currently in the antitrust laws.

Chairman GLENN. How do we make sure that between the lab and commercialization or use that we bridge the gap so that we do not get behind?

Dr. BEMENT. Well, many of the facilities that you are going to need to do some of the sophisticated measurements currently exist in the national laboratories. The resources necessary to do the commercialization exist in industry. Of course, you then have the scientific base in universities.

I think it is more a matter of organization and leadership on the part of the Federal Government in investing in the technology that is needed. That is the leadership issue, to my mind, is greater than legal issues, or resource issues.

Chairman GLENN. Could ACTA help in something like this, as you have seen the way we have it outlined?

Dr. BEMENT. No question. ACTA could help, DARPA could help.

Chairman GLENN. Dr. Fields, you were going to comment a minute ago.

Dr. FIELDS. I have a slightly different perspective because I have been spending much of my time for the last few weeks on exactly this subject. I cannot answer the question you asked—namely, what is optimal—but I can tell you a little about what is actually happening and where the gaps are, because things are actually pretty good within the Government. Thanks to the good offices of OSTP and FCCSET, we have a number of committees that keep the Defense Department and NASA and the Department of Energy and the National Science Foundation very closely coordinated. Within DoD, we have a group that involve the services SDI, NSA and DARPA that meets every week on this. This is at the working level, not at the high policy level.

There is not a situation, I am happy to say, where we have inadvertent gaps. There is not a situation where we are inadvertently or accidentally doing things 2 or 3 or 4 times, as far as I can tell.

The way things have shaken out is that there are three kinds of investment: one is in the fundamental science; a second is in applications; and in between, in manufacturing technology. Fundamental science is being pursued by every one of the organizations that I named except DARPA. Applications are being pursued by all of the organizations you might expect—the Department of Energy, the Services and so on, including DARPA. But understand that at this point when I say applications, I mean studies of applications because it is clearly too early to build anything. You cannot build a submarine with a superconducting drive system as yet.

The manufacturing technology work, so far as I understand, is being pursued by DARPA. So we are concerned with the scale-up issues, with the process issues, the fabrication issues, the manufacturing issues. We will be establishing some, let me call them, pilot production lines or boutique factories to look at things both in the bulk material area and the thin film area. We are doing that with industry, the intent being to transfer that to industry so we have a firm base for defense. This, again, is dual-use technology over the next three or four years so you get both benefits for the same investment.

So far as I can tell, the problem is there is a limit to reprogramming, and so as we look at the different opportunities, there are some things we are simply not doing, some, if you like, product areas we are not looking at because we cannot afford it. It is really up to the Congress to say whether you want to fill in those gaps or not.

There are some hearings going on about this tomorrow which I will be testifying at, trying to identify some of those gaps.

Chairman GLENN. What should we be doing, Dr. Kahn? Anything or let it develop as is?

Dr. KAHN. There are two different parts of this process. There is what happens when the technology area is brand new and fairly unstructured. Then there is what happens further down the road when some of the early products are developed.

In the first phase, I think there are two mandatory actions, both of which are getting done now—and I do not know whether they are getting done at a sufficient level. One is to stimulate new ideas and developments and provide the necessary funds so that these activities can be pursued effectively.

The second action at this stage is to provide a mechanism where the ideas can be shared effectively and rapidly among all the people that need to know. I can envision various ways to do that, including grant programs that would allow the best idea of the month to be funded with minimal paperwork, or a variety of actions that an ACTA could help with and are probably being dealt with at some level by many of the other existing organizations.

Chairman GLENN. Is that something we should do at the Federal Government level?

Dr. KAHN. Yes, the Government can insure that both of these things happen. I do not know what the right investment level is, and so I cannot really speak to that. But it is very likely that whatever we are spending now, we could be spending quite a bit more productively. Also, the Government can surely stimulate some sharing of ideas.

The second part of that is what happens after the R&D produces results and that is the part of the process that I worry about even more than I do the initial part. Because in the United States we are very good at R&D and innovation and ideas and even developing initial products, but ultimately we get caught at the back end of the process when the competition picks up, and the marketplace has to decide between the alternative choices. This is essentially what the semiconductor industry faced, and I suspect we could face the same thing in superconductors if we developed the technology and got it to the market first, only to find out that somebody came in later with better products and lower prices.

So this is an area where an ACTA could play a very key role if it could understand how to help us improve our products and maintain or even increase market share in an area that we pioneered. Or, perhaps it could help us achieve a leadership role in an area we did not pioneer.

The other part of that back end process that I want to emphasize is the one that Craig just mentioned having to do with applications. There are very many potential applications for a technology like superconductors as there were—and still are—for semiconductors that it is hard to even lay out the range of possibilities. Many of them are inherently defense applications. Some will be inherently civilian. And there is another class that I think cannot be undertaken by any organization without a sufficient amount of financial backing and national commitment, and they fall in the area of infrastructure.

For example, everybody has talked about the idea of using superconducting technology to build magnetic railways, levitation railways that travel very fast. Yet even the establishment of a prototype system between say Ohio and Washington for high-speed transit on the ground is not something that might be very attractive to an industry to undertake by itself. We have no good mechanisms for making this happen rapidly today, and yet it would be a wonderful experiment to try somewhere and see how it works.

Such an experimental program could end up commercializing the technology in a much broader way than if we are restricted to conceptually smaller applications that the industry could do by itself.

Chairman GLENN. Dr. Noyce, you had a comment, yet let me say that in regard to Sematech, if I understand Sematech correctly, it was put together to remedy some of the problems.

How do we avoid having a superconductor Sematech here 15 years from now where we will all be sitting at the same table again?

Dr. NOYCE. Thank you for asking the question that way. I would just add a footnote to Dr. Kahn's comment here that the downstream process is going to make the integration of the Department of Industry and Trade more important. Because the major problem that the semiconductor industry has had and the reason it needs to redouble its efforts to become competitive is because of the damage that has been done to it by unfair trade practices on the part of our overseas competitors. This becomes an important element of the development of technology in the United States as well.

Nobody in the United States would start a new television set manufacturer today because you know damn well that the Japanese or the Koreans or whoever is going to dump you out of that business. If there is a prospect for profit and survival, the businesses will be started here; the applications for superconductors will, indeed, be found here. I have little doubt that the great part of the innovation in these materials will occur in the United States.

But once those are targeted by foreign governments, it is another story, and I think our trade administration become very important.

Chairman GLENN. Probably important is the time compression. We used to invent something and it took awhile for it to get overseas and percolate around the world. Now, we are in a time compression of some kind where things are invented—bingo. There was one report in the paper that after the superconductor meeting in New York where everybody was given their 5 minutes—and maybe some of you gentlemen were at that meeting, I do not know. But they were given that, and that night—this was being conducted in the daytime—there was a newspaper report saying that the Japanese called people around the globe in the middle of the night, called people out of bed, to come down and talk about how they are going to get organized to do this whole thing. Well, they are gearing up for this.

In times past when a breakthrough in science or technology occurred, it gradually became public knowledge. We always had the luxury of having it here first. We could develop it first. But now with modern communications and so on, new discoveries are worldwide within not even a day. This kind of information flows around the world, and everyone all over the world is free to take advantage of it.

Well, I do not say that is all bad, but it puts us at a disadvantage as far as using our own research in a timely way so that we get the advantage, so that we keep ahead. We develop the new things first, the research, and we no longer have the freedom of developing it in our own time.

Dr. NOYCE. Just another comment. As was pointed out, this work was done in the IBM labs in Switzerland and lay fallow for a year before it got the attention. When it was endorsed by the Americans, then the Japanese jumped in. So they are watching us. They are watching.

Chairman GLENN. You have introduced another level of complexity with American investment in IBM in Switzerland.

Yes, Dr. Bement.

Dr. BEMENT. I would like to point out that the meeting in New York is now being referred to as the "Woodstock of Physics."

I would like also to put a footnote on my earlier remarks. I indicated that resources were not an issue, but really resources are an issue in one special instance. I did not mention earlier that a lot of programs in superconductivity have been reprogrammed to move into the higher temperature materials. That may be a mistake in some cases because there was some very elegant and important work was being done in conventional superconductors that will allow us to better understand how to use these high temperature materials and associated device and processing technologies. That work ought to be continued.

Hopefully, there will be enough flexibility in the available resources to continue some of the work in conventional superconductors that is world class and also very important to the understanding of device technologies.

Chairman GLENN. I know we did not come to discuss all the details of superconductivity, but one that has intrigued me, I guess, more than almost anything else. I have talked for years about the necessity—if in the energy field I could have one breakthrough wish granted before nightfall tonight, it would be better electrical energy storage because that opens up all the possibility of electrical automobiles. And then you could go into it on a mass basis like the Redux system up at Lewis Lab at Cleveland for a while, that got dumped when this administration came in; and the aluminum air concept that Lawrence-Livermore was working on for a while out there.

Think about all the electrical generating capacity we have that is built just for peak load in the evening. It operates at 50 percent capacity on a 24-hour basis. We have got a dozen different ways we can convert the forces of nature over to electrical energy, but we cannot store it adequately and we cannot use it properly like for electric automobiles and mobility and things like that.

Now, superconductivity may make some of this possible, and little electric motors would be able to do what large ones used to do, and electric storage. The whole concept of this is just mind-boggling when you get into it a little bit, and it is an area that I have been particularly interested in in the past.

In the Redux system that they were working on at Lewis Lab up there in Cleveland they felt they wanted to scale up that project. They felt that if they scaled it up large enough they could take the output of a 1,000-megawatt power plant in non-peak hours, store it and bring it back on at peak times the next evening. If we could ever get something like that, we would not have to build any more power plants for the next 15 years. We would just make better use of what we have, run them at a constant rate, feed the net, store it when you are not feeding the net, and all the obvious advantages. Plus if we ever get to the practical electric car concept with electrical energy storage, then it seems to me we start freeing ourselves from our complete dependency on the petroleum we have, and we lessen some of the importance of areas like the Persian Gulf and other areas like that.

I just throw that in for free as a comment here.

Tell us a little bit about Sematech and what you are doing with that, Dr. Noyce. I am interested in that.

Dr. NOYCE. We are trying to get Sematech started by the end of the year. The industry has gotten together and put together the final plan. The SIA Board of Directors has approved that plan, has elected an interim board for Sematech of which I am a member right now. The industry has committed the first $1.6 million to administer to the expenses to get things started. A search is under way for the CEO, COO for the site at which Sematech will finally be situated, and efforts are under way to seek financial help from both the potential State in which it is located and from the Federal Government.

Many things here are chicken and egg. We cannot seek support from Government until Sematech is established. It is also clear that Sematech cannot survive without that financial aid. You cannot hire a chief executive until we can tell his wife where he is going to live, and we do not have a site. We cannot select a site, really, until we have the chief executive actually working on it. So we have got a lot of things that are in place.

But I think that this is the plan for Sematech——

Chairman GLENN. Is that a major problem for you? I just do not think that is one of your major problems.

Dr. NOYCE. I am kidding a little bit, but these all interact. I am saying that there are a lot of balls in the air at the same time.

I think that the surprising thing here is that there has been as much support for Sematech as there has been both from the Government people that we talked to and the industry people that we talked to. Other problems, we are looking to perhaps get some relief on antitrust law to make it more certain that Sematech is exempt under the Cooperative Research Act of 1984. It will be easier to sign up people if they are really assured that just because they have deep pockets they will not be sued. It is a concern that a lot of companies have these days.

I would things are moving ahead full steam, and there has been a great deal of enthusiasm on all parts.

Chairman GLENN. I know we are getting late, and I appreciate you gentlemen being willing to stick with us this long here. It is a fascinating area that you are working in that we are trying to consider here. Let me just get back to the bill here.

What we are trying to do is make a focal point, too, where one of you commented on the need for technology policy. I do not know whose statement that was in. Technology policy through the years has been a tremendous variable. I think the President's Scientific Advisory Committee, which, Dr. Bement, you mentioned Vannevar Bush and his treatise on the need for this back in the early days post-World War II. And then later on, as an out growth of that, the President's Scientific Advisory Committee, the PSAC Committee was formed. But I think it was not necessarily the leader in technology policy. It depended too much on who happened to be in which position at what time.

You had Jerry Wiesner back years ago, and he had President Kennedy's ear and away we went, and he established policy and that was that. There was not any doubt about the role that was played, and that is where technology policy was formed. It worked well.

But unless you had someone of sufficient stature in that job, and he had the President's ear and the President would act on his advice and everybody else in Government knew that that was where technology policy was coming from, it just does not work.

I will not make any comment other than to say you can get a group of scientists together right now and say they are the members of the President's Scientific Advisory Committee and the Chairman thereof right now, and everybody even in the science field is not aware of who they are. That is not a particular slam at anybody in that spot right now. It is just that through the years this position has gone down to having a less stature, perhaps, in Government and the scientific community than it has had in the past.

The reason I say that is because one of our efforts in this bill is to make this position a center where technology policy will undoubtedly be made, and we hope implemented. It is one of the purposes of this whole bill.

Does anyone else have any comments? Yes, Dr. Bement? We are going to have to end here. I have an appointment.

Dr. BEMENT. Just a brief comment. If you go back to the Bush reports, Science: The Endless Frontier, the three applications of science that were identified in the report were, first of all, to combat illness, in other words, focus on health, national security, and on the public good. Clearly, the science policy for health and defense got implemented fairly quickly. Science and technology for the public good tends to be a little bit too abstract and a little bit too amorphous, and so that policy still seems to be languishing.

I suspect that the Sematech model is going to go a long way, if it is fully implemented—and I hope it is—in defining technology policy. It would be more defined by doing, I think, rather than trying to sit down and understand what technology policy is ahead of time.

I think the provisions of this bill are also in that spirit. Elevating technology on the national agenda, and developing organization resources and policy-making mechanisms through leadership is probably the way that technology policy will probably evolve.

Chairman GLENN. Well, we have been fighting a rear guard action, here in the Congress, though. I do not want to ask your political affiliations, but the Administration came in, proposed support for very basic science, cut it, as we figure it here at this end of the avenue, some 29 percent. Now, that did not all go through. We did not cut that much. We short-stopped some of that cut and prevented those cuts from being implemented to that extent. But it was an enormous chop-back in the interest of the economy. We do have budget problems and a deficit. but I think even in lean times, our best guarantee for the future is that we are the ones learning these new things first and implementing them here. It is that kind of implementation that we are concerned about with this legislation. That is where we are driving.

With this time warp, this time compression here that we are into, it just seems to me it is critical. It has come to a critical mass in our time right now, and we have got to do something about it, whether it is the Sematech approach or whether it is trying to prevent the necessity for Sematech in the future, as we see superconductivity and any other breakthroughs in materials that you are so active in, Dr. Fields and others. We just have a wealth of information out there. We want to keep that coming. And where it used to automatically flow down and form new industry and business and jobs, it no longer automatically happens that way in our own country. That is what we are trying to do, make sure that we implement the transfer as fast as we can so we reap the benefits of our own research. That is the ultimate purpose of this.

You gentlemen have been very patient with us here today, and I could continue this on for some time if I did not have an appointment in my office in a few minutes. It is really a pleasure to talk with you on this, and I would solicit—and I say this very sincerely—any thoughts you have after you get home. Dictate them off and send them back to us, if you will, and other members when they read the testimony and other staff here may have some other further questions of you. We would appreciate a response so we can include it in the record.

A pleasure to have you here. Thank you very much.

Dr. NOYCE. Thank you.

Dr. BEMENT. Thank you.

Dr. FIELDS. Thank you.

Dr. KAHN. Thank you.

Chairman GLENN. The hearing on S. 1233 is completed.

[Whereupon, at 4:45 p.m., the Committee adjourned.]

APPENDIX

100TH CONGRESS
1ST SESSION

S. 1233

To establish as an executive department of the Government a Department of Industry and Technology, to establish within that Department the Advanced Civilian Technology Agency, to establish the United States Trade Administration, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 19 (legislative day, MAY 13), 1987

Mr. GLENN introduced the following bill; which was read twice and referred to the Committee on Governmental Affairs

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A BILL

To establish as an executive department of the Government a Department of Industry and Technology, to establish within that Department the Advanced Civilian Technology Agency, to establish the United States Trade Administration, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Economic Competitiveness, International Trade, and Technology Development Act of 1987".

TABLE OF CONTENTS

Sec. 1. Short title; table of contents.

TITLE I—DEPARTMENT OF INDUSTRY AND TECHNOLOGY

PART A— GENERAL PROVISIONS

Sec. 101. Findings.
Sec. 102. Definitions.

PART B—ESTABLISHMENT AND ORGANIZATION

Sec. 111. Establishment of Department.
Sec. 112. Principal officers.
Sec. 113. Functions of the Secretary.
Sec. 114. Office of the Under Secretary for Industry.
Sec. 115. Office of the Under Secretary for Technology.
Sec. 116. United States Travel and Tourism Administration.
Sec. 117. National Oceanic and Atmospheric Administration.
Sec. 118. Additional officers.

PART C—ADVANCED CIVILIAN TECHNOLOGY AGENCY

Sec. 121. Establishment of Agency.
Sec. 122. Functions of Agency.
Sec. 123. National Advanced Civilian Technology Advisory Board.
Sec. 124. Grants, contracts, and cooperative agreements.
Sec. 125. Authorization of appropriations.

PART D—TRANSFERS TO THE DEPARTMENT

Sec. 131. Transfers from the Department of Commerce.

PART E—ADMINISTRATIVE PROVISIONS

Sec. 141. Personnel provisions.
Sec. 142. Delegation and assignment.
Sec. 143. Succession.
Sec. 144. Reorganization.
Sec. 145. Rules.
Sec. 146. Working capital fund.
Sec. 147. Contracts, grants, and cooperative agreements.
Sec. 148. Publications.
Sec. 149. Use of facilities.
Sec. 150. Field offices.
Sec. 151. Gifts and bequests.
Sec. 152. Seal of Department.
Sec. 153. Annual report.

PART F—CONFORMING PROVISIONS

Sec. 161. Amendments.
Sec. 162. Repeals.

TITLE II—UNITED STATES TRADE ADMINISTRATION

Sec. 201. Redesignation.
Sec. 202. Transfers of functions from the Department of Commerce.
Sec. 203. Additional Deputy United States Trade Administrators.
Sec. 204. Functions of the Administrator.
Sec. 205. Technical amendments.

TITLE III—TRANSITIONAL, SAVINGS, AND CONFORMING PROVISIONS

Sec. 301. Transfer and allocations of appropriations and personnel.
Sec. 302. Incidental transfers.
Sec. 303. Effect on personnel.
Sec. 304. Savings provisions.
Sec. 305. Separability.
Sec. 306. Reference.
Sec. 307. Transition.
Sec. 308. Termination of the Department of Commerce.

TITLE IV—MISCELLANEOUS

Sec. 401. Effective date.
Sec. 402. Interim appointments.
Sec. 403. Authorization of appropriations.

TITLE I—DEPARTMENT OF INDUSTRY AND TECHNOLOGY

PART A— GENERAL PROVISIONS

FINDINGS

SEC. 101. The Congress finds and declares that—

(1) the expansion of United States participation in international trade through aggressive promotion and marketing of American goods and services and accelerated technology development and application are principal national goals;

(2) the economy of the United States is so inextricably linked with the international economic system that all domestic economic sectors are influenced by the dynamics of global trade and investment;

(3) the expansion of United States participation in international trade and investment will improve the general welfare of the people of the United States by increasing demand for American products and services,

creating jobs, and increasing the gross national product;

(4) business, labor, and all levels of government must join efforts to place high priority on developing methods and policies to achieve the goals described in paragraph (1);

(5) the Federal Government can enhance the capability of United States businesses to compete in foreign markets by acting to (A) reduce political and economic barriers to sales and investments by such businesses, (B) promote American goods and services in foreign countries, (C) encourage aggressive participation by the private sector in the international marketplace, and (D) develop policies to enhance productivity and the development and application of technological advances;

(6) to achieve the important goals described in paragraph (1) through the means specified in paragraph (5), the United States must establish a cohesive national policy to (A) restore the competitive edge to United States industries, and (B) provide appropriate incentives for the development and application of advances in technology;

(7) effective and efficient Government action to enhance the capability of United States businesses to

compete in foreign markets requires coordination and development and implementation of Government policies relating to (A) the international trade and investment, and (B) the technology interests of the United States;

(8) a lack of analytical capability and knowledge concerning the competitive position and prospects of American industries and foreign industries greatly hampers or delays the ability of the United States to formulate responsible policies regarding economic competitiveness, technology development and application, and trade;

(9) government organization should recognize that (A) there is a critical need to link policies which enhance industrial competitiveness and technology development and application, and (B) analyses and policies regarding our domestic markets should be integrated with analyses and policies regarding the international markets in which our businesses compete;

(10) helping to foster the development and application of technology in United States industries is a proper and necessary role for government, working with the private sector;

(11) the present organizational structure of Government administration of international trade and in-

vestment activities, industrial promotion and growth activities, and technology advancement activities is lacking in the elements necessary to carry out the goals specified in paragraph (1) and is inconsistent with the findings specified in paragraphs (9) and (10); and

(12) the reorganization of Government functions relating to international trade and investment, industrial promotion and growth, and technology development and application, through the establishment of a Department of Industry and Technology, an Advanced Civilian Technology Agency, and a United States Trade Administration, will eliminate the inconsistencies described in paragraph (11) and will substantially enhance the economic well-being of the American people.

DEFINITIONS

SEC. 102. As used in this Act, unless otherwise provided or indicated by the context—

(1) the term "Administration" means the United States Trade Administration, as redesignated by section 201;

(2) the term "administrative and support functions" means legal functions, investigative functions, budget preparation and analysis functions, administrative functions, public information functions, and congressional relations functions carried out by the De-

partment and such other support services as may be determined by the Secretary;

(3) the term "Administrator" means the United States Trade Administrator, as redesignated by section 201;

(4) the term "Advisory Board" means the National Advanced Civilian Technology Advisory Board established by section 123;

(5) the term "Agency" means the Advanced Civilian Technology Agency established by section 121;

(6) the term "Department" means the Department of Industry and Technology;

(7) the term "executive department" has the meaning given to the term "Executive department" by section 101 of title 5, United States Code;

(8) the term "Federal agency" has the meaning given to the term "agency" by section 551(1) of such title;

(9) the term "function" means any duty, obligation, power, authority, responsibility, right, privilege, activity, or program;

(10) the term "office" includes any office, administration, agency, institute, unit, organizational entity, or component thereof; and

(11) the term "Secretary" means the Secretary of Industry and Technology.

PART B—ESTABLISHMENT AND ORGANIZATION

ESTABLISHMENT OF DEPARTMENT

SEC. 111. (a) There is established an executive department to be known as the Department of Industry and Technology.

PRINCIPAL OFFICERS

SEC. 112. (a) The Department shall be administered by a Secretary of Industry and Technology, who shall be appointed by the President, by and with the advice and consent of the Senate.

(b)(1) There shall be in the Department a Deputy Secretary of Industry and Technology, who shall be appointed by the President, by and with the advice and consent of the Senate. The Deputy Secretary shall perform such functions as the Secretary may prescribe.

(2) The Deputy Secretary shall act for and exercise the functions of the Secretary during the absence or disability of the Secretary or in the event the office of Secretary becomes vacant. The Deputy Secretary shall act for and exercise the functions of the Secretary until the absence or disability of the Secretary no longer exists or a successor to the Secretary has been appointed by the President and confirmed by the Senate.

FUNCTIONS OF THE SECRETARY

SEC. 113. In addition to the functions transferred to and assigned to the Secretary by this Act, such other functions as the President may assign or delegate to the Secretary, and such other functions as the Secretary may, after the effective date of this Act, be required to carry out by law, the Secretary shall—

(1) seek and promote new opportunities for American products and services to compete in the world marketplace;

(2) assist businesses in developing export markets;

(3) support State governments involved in attracting international investment and expanding foreign markets for goods and services produced in such States;

(4) analyze domestic as well as international economic trends and developments in order to understand and foster the conditions that enhance productivity and advances in technology development and application;

(5) serve as the principal advisor to the President on government policies designed to contribute to the enhancement of the ability of American industry and services to compete in international markets;

(6) serve as the principal advisor to the President in identifying and assessing the consequences of any

government policies which adversely affect, or have the potential to adversely affect, the competitiveness of United States industries and services;

(7) promote cooperation between business, labor, and government in order to—

(A) improve industrial performance, technology development and application, and the ability of American industries to compete in international markets; and

(B) facilitate consultation and communication between the Federal Government and the private sector concerning domestic industrial performance and prospects as well as the performance and prospects of foreign competitors;

(8) exercise responsibility, through the Stevenson-Wydler Technology Innovation Act of 1980 and other policies, for the Federal Government's role in encouraging technological innovation for industrial and commercial purposes;

(9) serve as the principal advisor to the President in formulating and carrying out policies which advance the development and application of technology to civilian goods and services;

(10) promote and facilitate the development and application of new technology in order to provide new

products for the marketplace and new processes to improve the productivity and quality of goods and services;

(11) carry out the functions specified in part C;

(12) develop policies and practices to encourage technological considerations during the development of economic policies and activities for the Nation;

(13) assist industry to consider the role of, and the implications of, advances in domestic and foreign technology;

(14) monitor industrial technology development programs, including cooperative research and development centers and cooperative technology programs;

(15) promote and undertake the development, collection, analysis, and dissemination of—

(A) data and information relating to the development and use of foreign and domestic technology; and

(B) economic and technological information relating to the activities of the Secretary and the Department;

(16) assist interested trade associations, State technology agencies, labor organizations, and universities to disseminate information on new product and

process technologies to interested businesses and other entities throughout the United States;

(17) develop, in cooperation with other appropriate Federal agencies, long-range programs to promote American international economic and technology policy interests; and

(18) mobilize and facilitate the participation of American private capital and skills in the development of the economic and social progress of friendly developing countries and areas.

OFFICE OF THE UNDER SECRETARY FOR INDUSTRY

SEC. 114. (a)(1) There shall be in the Department the Office of the Under Secretary for Industry. The Office of the Under Secretary for Industry shall be administered by the Under Secretary of Industry and Technology for Industry, who shall be appointed by the President, by and with the advice and consent of the Senate. Such Office shall be composed of—

(A) the Office of Economic Analysis established by subsection (b);

(B) the Office of Trade Development established by subsection (c);

(C) the United States and Foreign Commercial Service established by subsection (d);

(D) the Office of Economic Development established by subsection (e);

(E) the Bureau of the Census established by subsection (f);

(F) the Minority Business Development Agency established by subsection (g); and

(G) the offices specified in paragraph (2).

(2)(A) There shall be within the Office of the Under Secretary for Industry the Office of the Chief Economist. Such Office shall be headed by the Chief Economist, who shall be appointed by the Secretary. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Chief Economist, shall carry out all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Chief Economist of the Department of Commerce.

(B) There shall be within the Office of the Under Secretary for Industry the Office of Strategic Resources. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Office of Strategic Resources, shall carry out all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Office of Strategic Resources of the Department of Commerce.

(3) The Secretary, through the Under Secretary of Industry and Technology for Industry, shall—

(A) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this Act, were performed by the Secretary of Commerce through the Under Secretary of Commerce for International Trade; and

(B) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this Act, were performed by the Secretary of Commerce through the Under Secretary of Commerce for Economic Affairs (other than functions described in subsections (a)(3)(B), (a)(3)(C), and (b)(2) of section 115).

(b) There shall be in the Department the Office of Economic Analysis. Such Office shall be administered by the Director of Economic Analysis, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of Economic Analysis, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section

131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of—

(1) the Director of the Bureau of Economic Analysis of the Department of Commerce;

(2) the Office of Economic Conditions of the Department of Commerce; and

(3) the Office of Business Analysis of the Department of Commerce.

(c) There shall be in the Department the Office of Trade Development. Such Office shall be administered by the Director of Trade Development, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of Trade Development, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce for Trade Development.

(d) There shall be in the Department the United States and Foreign Commercial Service. Such Service shall be administered by the Director General of the United States and Foreign Commercial Service, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director General of the United States and Foreign Commercial Service, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director General of the United States and Foreign Commercial Service of the Department of Commerce.

(e) There shall be in the Department the Office of Economic Development. Such Office shall be administered by the Assistant Secretary of Industry and Technology for Economic Development, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Assistant Secretary of Industry and Technology for Economic Development, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce for Economic Development.

(f) There shall be in the Department the Bureau of the Census. Such Bureau shall be administered by the Director of the Census, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of the Census, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the Census of the Department of Commerce.

(g) There shall be in the Department the Minority Business Development Agency. Such Agency shall be administered by a Director, who shall be appointed by the Secretary. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of the Minority Business Development Agency, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the Minority Business Development Agency.

OFFICE OF THE UNDER SECRETARY FOR TECHNOLOGY

SEC. 115. (a)(1) There shall be in the Department the Office of the Under Secretary for Technology. Such Office shall be administered by the Under Secretary of Industry and Technology for Technology, who shall be appointed by the President, by and with the advice and consent of the Senate. Such Office shall be composed of—

(A) the Advanced Civilian Technology Agency established by part C;

(B) the Office of Technology Information established by subsection (b);

(C) the Patent and Trademark Office established by subsection (c);

(D) the National Bureau of Standards established by subsection (d); and

(E) the Office of Communications and Information established by subsection (e).

(2) The Secretary, through the Under Secretary of Industry and Technology for Technology, shall—

(A) carry out the functions of the Secretary described in paragraphs (7)(A), (10), (12), (13), and (14) of section 113;

(B) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this Act, were carried out by the Secretary of Commerce through the Assistant Secretary of Commerce for Productivity, Technology, and Innovation; and

(C) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this Act, were carried out by the Secretary of Commerce through the Under Secretary of Commerce for Economic Affairs and which relate directly to the management by such Under Secretary of the Office of the Assistant Secretary of Commerce for Productivity, Technology, and Innovation.

(b)(1) There shall be in the Department the Office of Technology Information. Such Office shall be administered by the Assistant Secretary of Industry and Technology for Technology Information, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Assistant Secretary of Industry and Technology for Technology Information, shall carry out the functions of the Secretary described in section 113(15).

(2) There shall be in the Office of Technology Information the National Technical Information Service. The National Technical Information Service shall be headed by the Director of the National Technical Information Service, who shall be appointed by the President, by and with the advice

and consent of the Senate. The Secretary, through the Assistant Secretary of Industry and Technology for Technology Information and the Director of the National Technical Information Service, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the National Technical Information Service of the Department of Commerce.

(c) There shall be in the Department the Patent and Trademark Office. The Patent and Trademark Office shall be administered by the Commissioner for Patents and Trademarks, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Technology and the Commissioner for Patents and Trademarks, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce and Commissioner for Patents and Trademarks.

(d) There shall be in the Department the National Bureau of Standards. The National Bureau of Standards shall be administered by the Director of the National Bureau of Standards, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Technology and the Director of the National Bureau of Standards, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the National Bureau of Standards of the Department of Commerce.

(e) There shall be in the Department the Office of Communications and Information. The Office of Communications and Information shall be administered by the Assistant Secretary of Industry and Technology for Communications and Information, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology and the Assistant Secretary of Industry and Technology for Communications and Information, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce for Communications and Information.

UNITED STATES TRAVEL AND TOURISM ADMINISTRATION

SEC. 116. There shall be in the Department the United States Travel and Tourism Administration. The United States Travel and Tourism Administration shall be administered by the Under Secretary of Industry and Technology for Travel and Tourism, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Travel and Tourism, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Under Secretary of Commerce for Travel and Tourism.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

SEC. 117. (a) There shall be in the Department the National Oceanic and Atmospheric Administration. The National Oceanic and Atmospheric Administration shall be administered by the Under Secretary of Industry and Technology for Oceans and Atmosphere, who shall also serve as Administrator of the National Oceanic and Atmospheric Administration, and who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Oceans and Atmosphere, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this Act, performed by the Secretary of Commerce or the Department of Commerce through or under the direction of the Under Secretary of Commerce for Oceans and Atmosphere.

(b) There shall be in the Department an Assistant Secretary of Industry and Technology for Oceans and Atmosphere, who shall serve as Deputy Administrator of the National Oceanic and Atmospheric Administration.

ADDITIONAL OFFICERS

SEC. 118. (a) There shall be in the Department two additional Assistant Secretaries of Industry and Technology, who shall be appointed by the President, by and with the advice and consent of the Senate. Each additional Assistant Secretary of Industry and Technology shall perform such functions as the Secretary may prescribe.

(b) There shall be in the Department a General Counsel, who shall be appointed by the President, by and with the advice and consent of the Senate. The General Counsel shall provide legal assistance to the Secretary concerning the activities, programs, and policies of the Department.

(c) There shall be in the Department an Inspector General who shall be appointed in accordance with the Inspector General Act of 1978, as amended by section 161(h) of this Act.

PART C—ADVANCED CIVILIAN TECHNOLOGY AGENCY

ESTABLISHMENT OF AGENCY

SEC. 121. There shall be in the Department the Advanced Civilian Technology Agency. The Agency shall be administered by an Administrator, who shall be appointed by the President, by and with the advice and consent of the Senate.

FUNCTIONS OF AGENCY

SEC. 122. (a) The Secretary, through the Under Secretary of Industry and Technology for Technology and the Administrator of the Agency, shall—

(1) promote and assist in the development and application of advanced technological capabilities to civilian goods and services;

(2) contribute to United States economic competitiveness by supporting research by businesses and academic institutions to advance civilian technological developments and to facilitate the more rapid commercialization of products, processes, and services based on such developments;

(3) assist industrial concerns in technological development and in the commercialization of technology

in order to enable new products to reach the marketplace as expeditiously as possible; and

(4) make grants and enter into contracts and cooperative agreements in accordance with section 124.

(b) In carrying out this part, the Secretary, through the Administrator of the Agency, shall—

(1) coordinate activities of the Agency with activities conducted by the Defense Advanced Research Projects Agency and the National Science Foundation;

(2) obtain the advice and assistance of the heads of Federal agencies involved in the conduct of research and the heads of Federal laboratories; and

(3) utilize the expertise and abilities of private business concerns and research and development organizations designated under section 124.

NATIONAL ADVANCED CIVILIAN TECHNOLOGY ADVISORY BOARD

SEC. 123. (a) There shall be in the Agency the National Advanced Civilian Technology Advisory Board. The Advisory Board shall provide advice to the Secretary, the Under Secretary of Industry and Technology for Technology, and the Administrator of the Agency with respect to the policies, programs, and activities of the Agency.

(b)(1) The Advisory Board shall consist of—

(A) twenty-one members appointed by the Secretary in accordance with the requirements of paragraph (2); and

(B) the Director of the Defense Advanced Research Projects Agency and the Director of the National Science Foundation, who shall be ex officio members.

(2)(A) Members of the Advisory Board appointed under paragraph (1)(A) shall—

(i) be broadly representative of the various sectors of United States industries, including manufacturing, advanced technology services, finance, transportation, energy, materials production, telecommunications, biotechnology, and medicine; and

(ii) include representatives of small, medium, and large businesses.

(B) At least 14 members of the Advisory Board shall be representatives of industries and the remaining members of the Advisory Board shall be representatives of academic institutions, State and local governments, and nonprofit private organizations.

(C) In appointing members to the Advisory Board, the Secretary shall consult with representatives of various groups representing business concerns.

(c) Members of the Advisory Board shall be appointed by the Secretary within 60 days after the date of enactment of this Act.

(d) Each member of the Advisory Board appointed under subsection (b)(1)(A) shall be appointed for a term of three years, except that of the members first appointed, seven shall be appointed for a term of one year, seven shall be appointed for a term of two years, and seven shall be appointed for a term of three years, as designated by the Secretary at the time of appointment.

(e) A vacancy in the Advisory Board shall be filled in the same manner as the original appointment was made. Any member appointed to fill a vacancy for an unexpired term shall be appointed for the remainder of such term. A member of the Advisory Board may serve after the expiration of the member's term until a successor has taken office.

(f) A vacancy in the Advisory Board shall not affect its powers.

(g) The members of the Advisory Board shall elect a Chairman from among the members of the Advisory Board.

(h) Eleven members of the Advisory Board shall constitute a quorum.

(i) The Advisory Board shall hold its first meeting on a date specified by the Secretary which is not later than 90 days after the date of enactment of this Act. Thereafter, the

Advisory Board shall meet at the call of the Chairman or a majority of its members, but shall meet at least twice each year.

(j)(1) Each member of the Advisory Board shall serve without compensation.

(2) While away from their homes or regular places of business in the performance of duties for the Advisory Board, all members of the Advisory Board shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under sections 5702 and 5703 of title 5, United States Code.

GRANTS, CONTRACTS, AND COOPERATIVE AGREEMENTS

SEC. 124. (a)(1) The Secretary, through the Administrator of the Agency, shall make grants and enter into contracts and cooperative agreements with research and development organizations in order to support long-term projects for (A) research and applications thereof concerning the development of new or advanced technology of significant value to the civilian sector of the United States economy, and (B) research concerning the commercial adaptation of such technology. Grants, contracts, and cooperative agreements under this section shall be designed to support projects which would not, in the absence of such a grant, contract, or cooperative agreement, be conducted.

(2) In order to receive a grant, contract, or cooperative agreement under this section, a research and development organization—

(A) shall demonstrate to the Secretary significant and substantial experience in technology development and management in the area in which the grant, contract, or cooperative agreement is being made; and

(B) may consist of a consortia of private firms, academic institutions, or public or nonprofit entities, or any combination thereof.

(3) During any period when an individual or an officer or employee of a private firm, academic institution, or public or nonprofit private entity is a member of the Advisory Board, such individual, officer, or employee, and such firm, institution, or entity, may not receive a grant, contract, or cooperative agreement under this section.

(b) No grant may be made and no contract or cooperative agreement may be entered into under this section unless an application therefor is submitted to the Secretary, through the Administrator of the Agency. Such application shall be submitted in such form, at such time, and containing such information as the Secretary may by regulation prescribe.

(c) The Secretary, through the Administrator of the Agency, shall determine the Federal share and the non-Federal share of the costs of each project supported with a grant, contract, or cooperative agreement under this section.

(d) Each grant agreement, contract, or cooperative agreement entered into under subsection (a) shall contain such provisions as the Secretary considers appropriate to enable the United States to recover all or part of the funds provided to a research and development organization under the grant, contract, or cooperative agreement in any case in which the technology developed under such grant, contract, or cooperative agreement results in long-term profits for such organization or the participants in such organization.

(e) The authority of the Secretary to enter into contracts under this section shall be to such extent or in such amounts as may be provided in appropriation Acts.

AUTHORIZATION OF APPROPRIATIONS

SEC. 125. To carry out this part, there are authorized to be appropriated $80,000,000 for fiscal year 1988, $160,000,000 for fiscal year 1989, and $240,000,000 for fiscal year 1990.

PART D—TRANSFERS TO THE DEPARTMENT

TRANSFERS FROM THE DEPARTMENT OF COMMERCE

SEC. 131. Except for functions transferred by section 202, there are transferred to the Secretary—

(1) all functions of the Secretary of Commerce;

(2) all functions of the Department of Commerce; and

(3) all functions of, and all functions performed under the direction of, all officers and employees of the Department of Commerce.

PART E—ADMINISTRATIVE PROVISIONS

PERSONNEL PROVISIONS

SEC. 141. (a) The Secretary may appoint and fix the compensation of such officers and employees, including investigators, attorneys, and administrative law judges, as may be necessary to carry out the functions of the Secretary and the Department. Except as otherwise provided by law, such officers and employees shall be appointed in accordance with the civil service laws and their compensation fixed in accordance with title 5, United States Code.

(b)(1) At the request of the Secretary, the Director of the Office of Personnel Management shall, under section 5108 of title 5, United States Code, provide for the establishment in each of the grade levels GS-16, GS-17, and GS-18, and in the Senior Executive Service, of a number of positions in the Department equal to the number of positions in that grade level which were used primarily for the performance of functions transferred by this Act and which were assigned and filled on the day before the effective date of this Act.

(2) Appointments to positions provided for under this subsection may be made without regard to the provisions of section 3324 of title 5, United States Code, if the individual

appointed in such position is an individual who is transferred in connection with the transfer of functions and offices under this Act and, on the day before the effective date of this Act, holds a position and has duties comparable to those of the position to which appointed under this subsection.

(3) The authority under this subsection with respect to any position established at the grade level GS-16, GS-17, or GS-18 shall terminate when the person first appointed to fill such position ceases to hold such position.

(4) For purposes of section 414(a)(3)(A) of the Civil Service Reform Act of 1978, an individual appointed under this subsection shall be deemed to occupy the same position as the individual occupied on the day before the effective date of this Act.

(c) The Secretary may obtain the services of experts and consultants in accordance with section 3109 of title 5, United States Code, and compensate such experts and consultants for each day (including traveltime) at rates not in excess of the rate of pay for grade GS-18 of the General Schedule under section 5332 of such title. The Secretary may pay experts and consultants who are serving away from their homes or regular place of business travel expenses and per diem in lieu of subsistence at rates authorized by sections 5702 and 5703 of such title for persons in Government service employed intermittently.

(d)(1)(A) The Secretary is authorized to accept voluntary and uncompensated services without regard to the provisions of section 1342 of title 31, United States Code, if such services will not be used to displace Federal employees employed on a full-time, part-time, or seasonal basis.

(B) The Secretary is authorized to accept volunteer service in accordance with the provisions of section 3111 of title 5, United States Code.

(2) The Secretary is authorized to provide for incidental expenses, including but not limited to transportation, lodging, and subsistence for individuals who provide voluntary services under subparagraph (A) or (B) of paragraph (1).

(3) An individual who provides voluntary services under paragraph (1)(A) shall not be considered a Federal employee for any purpose other than for purposes of chapter 81 of title 5, United States Code, relating to compensation for work injuries, and chapter 171 of title 28, United States Code, relating to tort claims.

DELEGATION AND ASSIGNMENT

SEC. 142. Except where otherwise expressly prohibited by law or otherwise provided by this Act, the Secretary may delegate any of the functions transferred to the Secretary by this Act and any function transferred or granted to the Secretary after the effective date of this Act to such officers and employees of the Department as the Secretary may designate, and may authorize successive redelegations of such functions as may be necessary or appropriate. No delegation of functions by the Secretary under this section or under any other provision of this Act shall relieve the Secretary of responsibility for the administration of such functions.

SUCCESSION

SEC. 143. (a) Subject to the authority of the President, and except as provided in section 112(b), the Secretary shall prescribe the order by which officers of the Department who are appointed by the President, by and with the advice and consent of the Senate, shall act for, and perform the functions of, the Secretary or any other officer of the Department appointed by the President, by and with the advice and consent of the Senate, during the absence or disability of the Secretary or such other officer, or in the event of a vacancy in the office of the Secretary or such other officer.

(b) Notwithstanding any other provision of law, and unless the President directs otherwise, an individual acting for the Secretary or another officer of the Department pursuant to subsection (a) shall continue to serve in that capacity until the absence or disability of the Secretary or such other officer no longer exists or a successor to the Secretary or such other officer has been appointed by the President and confirmed by the Senate.

REORGANIZATION

SEC. 144. (a) Except as provided in subsection (b), the Secretary is authorized to allocate or reallocate functions among the officers of the Department, and to establish, consolidate, alter, or discontinue such organizational entities in the Department as may be necessary or appropriate.

(b) The authority of the Secretary under subsection (a) does not apply to any office established in the Department by this title or any other function which this title specifies shall be performed by a particular officer or employee of the Department.

RULES

SEC. 145. The Secretary is authorized to prescribe, in accordance with the provisions of chapters 5 and 6 of title 5, United States Code, such rules and regulations as the Secretary determines necessary or appropriate to administer and manage the functions of the Secretary or the Department.

WORKING CAPITAL FUND

SEC. 146. (a) The Secretary is authorized to establish for the Department a working capital fund, to be available without fiscal year limitation, for expenses necessary for the maintenance and operation of such common administrative services as the Secretary shall find to be desirable in the interest of economy and efficiency, including—

(1) a central supply service for stationery and other supplies and equipment for which adequate stocks may be maintained to meet in whole or in part the requirements of the Department and its components;

(2) central messenger, mail, and telephone service and other communications services;

(3) office space, central services for document reproduction and for graphics and visual aids;

(4) a central library service; and

(5) such other services as may be approved by the Director of the Office of Management and Budget.

(b) The capital of the fund shall consist of any appropriations made for the purpose of providing working capital and the fair and reasonable value of such stocks of supplies, equipment, and other assets and inventories on order as the Secretary may transfer to the fund, less the related liabilities and unpaid obligations. The fund shall be reimbursed in advance from available funds of agencies and offices in the Department, or from other sources, for supplies and services at rates which will approximate the expense of operation, including the accrual of annual leave and the depreciation of equipment. The fund shall also be credited with receipts from sale or exchange of property and receipts in payment for loss or damage to property owned by the fund. There shall be covered into the United States Treasury as miscellaneous receipts any surplus of the fund (all assets, liabilities, and prior losses considered) above the amounts transferred or appropriated to establish and maintain the fund. There shall be transferred to the fund the stocks of supplies, equipment, other assets, liabilities, and unpaid obligations relating to those services which the Secretary determines will be performed.

CONTRACTS, GRANTS, AND COOPERATIVE AGREEMENTS

SEC. 147. (a) Subject to the provisions of the Federal Property and Administrative Services Act of 1949, the Secretary may make, enter into, and perform such contracts, leases, cooperative agreements, grants, or other similar transactions with public agencies, private organizations, and persons, and make payments (in lump sum or installments, and by way of advance or reimbursement, and, in the case of any grant, with necessary adjustments on account of overpayments and underpayments) as the Secretary considers necessary or appropriate to carry out the functions of the Secretary or the Department.

(b) Notwithstanding any other provision of this Act, the authority to enter into contracts or to make payments under this title shall be effective only to such extent or in such amounts as are provided in advance in appropriation Acts. This subsection does not apply with respect to the authority granted under section 151.

PUBLICATIONS

SEC. 148. Subject to such procedures of the Director of the Office of Management and Budget may prescribe, the Secretary may disseminate in the form of reports or publications such information as the Secretary considers appropriate.

USE OF FACILITIES

SEC. 149. (a) With their consent, the Secretary, with or without reimbursement, may use the research, services, equipment, and facilities of—

(1) an individual;

(2) any public or private nonprofit agency or organization, including any agency or instrumentality of the United States or of any State, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States;

(3) any political subdivision of any State, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States; or

(4) any foreign government,

in carrying out any function of the Secretary or the Department.

(b) The Secretary, under terms, at rates, and for periods that the Secretary considers to be in the public interest, may permit the use by public and private agencies, corporations, associations or other organizations, or by individuals, of any real property, or any facility, structure or other improvement thereon, under the custody of the Secretary. The Secretary may require permittees under this section to maintain or recondition, at their own expense, the real property, facilities, structures, and improvements used by such permittees.

FIELD OFFICES

SEC. 150. The Secretary may establish, alter, consolidate, maintain, or discontinue State, regional, district, local, or other field offices as the Secretary finds necessary or appropriate to perform any function of the Secretary or the Department.

GIFTS AND BEQUESTS

SEC. 151. (a) The Secretary is authorized to accept, hold, administer, and utilize gifts and bequests of property, both real and personal, for the purpose of aiding or facilitating the work of the Department. Gifts and bequests of money and the proceeds from sales of other property received as gifts or bequests shall be deposited in the United States Treasury in a separate fund and shall be disbursed on order of the Secretary. Property accepted pursuant to this paragraph, and the proceeds thereof, shall be used as nearly as possible in accordance with the terms of the gift or bequest.

(b) For the purpose of Federal income, estate, and gift taxes, and State taxes, property accepted under subsection (a) shall be considered a gift or bequest to or for use of the United States.

(c) Upon the request of the Secretary, the Secretary of the Treasury may invest and reinvest in securities of the United States or in securities guaranteed as to principal and interest by the United States any moneys contained in the fund provided for in subsection (a). Income accruing from such securities, and from any other property held by the Secretary pursuant to subsection (a), shall be deposited to the credit of the fund, and shall be disbursed upon order of the Secretary.

SEAL OF DEPARTMENT

SEC. 152. The Secretary shall cause a seal of office to be made for the Department of such design as the Secretary shall approve. Judicial notice shall be taken of such seal.

ANNUAL REPORT

SEC. 153. The Secretary shall, as soon as practicable after the end of each fiscal year, prepare and transmit a written report to the President for transmission to the Congress on the activities of the Department during such fiscal year.

PART F—CONFORMING PROVISIONS

AMENDMENTS

SEC. 161. (a) Section 19(d)(1) of title 3, United States Code, is amended by striking out "Secretary of Commerce," and inserting in lieu thereof "Secretary of Industry and Technology,".

(b) Section 101 of title 5, United States Code, is amended by striking out the item relating to the Department of Commerce and inserting in lieu thereof the following:

"The Department of Industry and Technology.".

(c) Section 5312 of such title is amended—

(1) by striking out the item relating to the Secretary of Commerce; and

(2) by adding at the end thereof the following:

"Secretary of Industry and Technology.".

(d) Section 5313 of title 5, United States Code, is amended by adding at the end thereof the following:

"Deputy Secretary, Department of Industry and Technology.

"Under Secretary of Industry and Technology for Industry.

"Under Secretary of Industry and Technology for Technology.".

(e) Section 5314 of such title is amended—

(1) by striking out the item relating to the Under Secretary of Commerce, the Under Secretary of Commerce for Economic Affairs, and the Under Secretary of Commerce for Travel and Tourism;

(2) by striking out the item relating to the Under Secretary of Commerce for Oceans and Atmosphere;

(3) by adding at the end thereof the following:

"Under Secretary of Industry and Technology for Oceans and Atmosphere, who shall serve as Administrator of the National Oceanic and Atmospheric Administration.

"Under Secretary of Industry and Technology for Travel and Tourism.

"Director of the Office of Economic Analysis, Department of Industry and Technology.

"Director of the Office of Trade Development, Department of Industry and Technology.

"Director General of the United States and Foreign Commercial Service, Department of Industry and Technology.

"Administrator of the Advanced Civilian Technology Agency, Department of Industry and Technology.

"Director of the National Bureau of Standards, Department of Industry and Technology.".

(f) Section 5315 of such title is amended—

(1) by striking out the item relating to the Assistant Secretaries of Commerce;

(2) by striking out the item relating to the General Counsel of the Department of Commerce;

(3) by striking out the item relating to the Assistant Secretary of Commerce for Oceans and Atmosphere;

(4) by striking out the item relating to the Director of the National Bureau of Standards of the Department of Commerce;

(5) by adding at the end thereof the following:

"Assistant Secretary of Industry and Technology for Economic Development.

"Assistant Secretary of Industry and Technology for Technology Information.

"Assistant Secretary of Industry and Technology for Communications and Information.

"Assistant Secretary of Industry and Technology for Oceans and Atmosphere, who shall serve as Deputy Administrator of the National Oceanic and Atmospheric Administration.

"Additional Assistant Secretaries of Industry and Technology (2).

"Commissioner of Patents and Trademarks, Department of Industry and Technology.

"General Counsel, Department of Industry and Technology.

"Inspector General, Department of Industry and Technology.".

(g) Section 5316 of such title is amended—

(1) by striking out the item relating to the Commissioner of Patents, Department of Commerce;

(2) by striking out the item relating to the Director of the Bureau of the Census, Department of Commerce;

(3) by striking out the item relating to the National Export Expansion Coordinator, Department of Commerce;

(4) by striking out the item relating to the Director, United States Travel Service, Department of Commerce;

(5) by striking out the item relating to the Inspector General, Department of Commerce;

(6) by adding at the end thereof the following:

"Director of the Bureau of the Census, Department of Industry and Technology.

"Director of the National Technical Information Service, Department of Commerce.".

(h) The Inspector General Act of 1978 is amended—

(1) by striking out "the Department of Commerce," in section 2(1);

(2) by inserting "the Department of Industry and Technology," after "Urban Development," in such section;

(3) by striking out subparagraph (B) of section 9(a)(1);

(4) by redesignating subparagraphs (C) through (E) of such section as subparagraphs (B) through (D), respectively;

(5) by inserting before subparagraph (F) of such section the following:

"(E) of the Department of Industry and Technology, all functions of the Inspector General of the Department of Commerce and the Office of the Inspector General of the Department of Commerce relating to the functions transferred to the Secretary of Industry and Technology by section 131 of the Enhancement of Economic Competitiveness, International Trade, and Technology Development Act of 1987;";

(6) by striking out "Commerce," each place it appears in section 11; and

(7) by inserting "Industry and Technology," after "Urban Development," each place it appears in such section.

REPEALS

SEC. 162. (a)(1) The first section of the Act entitled "An Act to establish the Department of Commerce and Labor", approved February 14, 1903 (15 U.S.C. 1501), is repealed.

(2) The first section of the Act entitled "An Act to create a Department of Labor", approved March 4, 1913 (15 U.S.C. 1501), is amended by striking out beginning with "and the Department of Commerce and Labor" through "accordingly".

(b) Subsection (a) of the first section of the Act entitled "An Act to authorize an Under Secretary of Commerce for Economic Affairs", approved June 16, 1982 (96 Stat. 115; 15 U.S.C. 1503a), is repealed.

(c) The Act entitled "An Act to provide for the appointment of one additional Assistant Secretary of Commerce, and for other purposes", approved July 15, 1947 (15 U.S.C. 1505), is repealed.

(d) The first sentence of section 304 of the Department of Commerce Appropriation Act, 1955 (15 U.S.C. 1506), is repealed.

(e) The Act entitled "An Act to authorize an additional Assistant Secretary of Commerce", approved February 16, 1962 (15 U.S.C. 1507), is repealed.

(f) Subsection (a) of section 9 of the Maritime Appropriation Authorization Act for Fiscal Year 1978 (15 U.S.C. 1507b), is repealed.

(g)(1) The first section of the Act of March 18, 1904 (33 Stat. 135, chapter 716; 15 U.S.C. 1508), is amended by striking out the paragraph relating to the Office of the Solicitor of the Department of Commerce and Labor.

(2) Section 2 of the Act of July 17, 1952 (66 Stat. 758, chapter 932; 15 U.S.C. 1508), is repealed.

(h)(1) Sections 4 and 12 of the Act entitled "An Act to Establish the Department of Commerce and Labor", approved February 14, 1903 (15 U.S.C. 1511), are repealed.

(2) The first section of the Act of August 23, 1912 (37 Stat. 407, chapter 350; 15 U.S.C. 1511), is amended by

striking out the paragraph relating to the Bureau of Foreign and Domestic Commerce.

(3) The first section of the Act of January 5, 1923 (42 Stat. 1109, chapter 23; 15 U.S.C. 1511), is repealed.

(4) The first section of the Act of May 27, 1936 (49 Stat. 1380, chapter 463; 15 U.S.C. 1511), is repealed.

(i) Section 8 of the Act entitled "An Act to establish the Department of Commerce and Labor", approved February 14, 1903 (15 U.S.C. 1519), is repealed.

(j) Title III of the Act entitled "An Act making appropriations for the Departments of State, Justice, and Commerce for the fiscal year ending June 30, 1945, and for other purposes", approved June 28, 1944 (15 U.S.C. 1521), is amended by striking out the paragraph relating to the working capital fund of the Department of Commerce.

(k) Sections 1, 2, and 3 of Public Law 88-611 (15 U.S.C. 1522, 1523, and 1524) are repealed.

TITLE II—UNITED STATES TRADE ADMINISTRATION

REDESIGNATION

SEC. 201. (a) The Office of the United States Trade Representative in the Executive Office of the President is redesignated as the United States Trade Administration. The United States Trade Representative is redesignated as the United States Trade Administrator. Each Deputy United

States Trade Representative is redesignated as a Deputy Trade Administrator.

(b) Any reference to the Office of the United States Trade Representative, the United States Trade Representative, a Deputy United States Trade Representative, or any other officer or employee of the Office of the United States Trade Representative, in any law, rule, regulation, certificate, directive, instruction, or any other official paper in force on the effective date of this Act shall be deemed to refer and apply to the United States Trade Administration, the United States Trade Administrator, a Deputy Trade Administrator, or the United States Trade Administrator, respectively.

TRANSFERS OF FUNCTIONS FROM THE DEPARTMENT OF COMMERCE

SEC. 202. (a) There are transferred to the Administrator—

(1) all functions of the Secretary of Commerce or the Department of Commerce with respect to or being administered through the Assistant Secretary of Commerce for International Economic Policy; and

(2) all functions of the Secretary of Commerce or the Department of Commerce which are being administered through the Under Secretary of Commerce for International Trade and which relate directly to the management by such Under Secretary of the Office of

the Assistant Secretary of Commerce for International Economic Policy.

(b) There are transferred to the Administrator—

(1) all functions of the Secretary of Commerce or the Department of Commerce with respect to or being administered through the Assistant Secretary of Commerce for Trade Administration; and

(2) all functions of the Secretary of Commerce or the Department of Commerce which are being administered through the Under Secretary of Commerce for International Trade and which relate directly to the management by such Under Secretary of the Office of the Assistant Secretary of Commerce for Trade Administration.

ADDITIONAL DEPUTY UNITED STATES TRADE ADMINISTRATORS

SEC. 203. (a) In addition to the Deputy Trade Administrators otherwise provided by law (and redesignated by section 201) there shall be in the Administration two Deputy Trade Administrators, who shall be appointed by the President, by and with the advice and consent of the Senate. The provisions of the second and third sentences of subsection (b)(2), and of subsection (c)(2), of section 141 of the Trade Act of 1974, shall apply to the Deputy Trade Administrators appointed under this subsection.

(b) One of the Deputy Trade Administrators appointed under subsection (a) shall be the Deputy Trade Administrator for Economic Policy. Notwithstanding any other provision of law, the Administrator shall carry out through such Deputy Trade Administrator—

(1) all functions transferred to the Administrator under section 202(a); and

(2) all functions of the Administrator relating to trade policy that are specifically concerned with industrial sector, the services sector, and the agricultural sector.

(c) One of the Deputy Trade Administrators appointed under subsection (a) shall be the Deputy Trade Administrator for Trade Programs. Notwithstanding any other provision of law, the Administrator shall carry out through such Deputy Trade Administrator all functions transferred to the Administrator under section 202(b).

(d)(1) One of the Deputy Trade Administrators appointed pursuant to other provisions of law (and redesignated by section 201) shall be the Deputy Trade Administrator for Trade Policy and Negotiation. Another of the Deputy Trade Administrators appointed pursuant to other provisions of law (and redesignated by section 201) shall be the Deputy Trade Administrator for Management.

FUNCTIONS OF THE ADMINISTRATOR

SEC. 204. (a) The Administrator shall—

(1) have primary responsibility for developing, and for coordinating the implementation of, United States international trade policy, including commodity matters, and, to the extent they are related to international trade policy, direct investment matters;

(2) serve as the principal advisor to the President on international trade policy and shall advise the President on the impact of other policies of the United States Government on international trade;

(3) have lead responsibility for the conduct of, and shall be the chief representative of the United States for, international trade negotiations in which the United States participates;

(4) issue and coordinate policy guidance to departments and agencies on basic issues of policy and interpretation arising in the exercise of international trade functions, to the extent necessary to assure the coordination of international trade policy and consistent with any other law;

(5) act as the principal spokesman of the President on international trade;

(6) report directly to the President and the Congress regarding, and be responsible to the President and the Congress for the administration of, trade agreements programs;

(7) advise the President and Congress with respect to nontariff barriers to international trade, international commodity agreements, and other matters which are related to the trade agreements programs;

(8) be responsible for making reports to Congress with respect to matters referred to in subparagraphs (3) and (6);

(9) be chairman of the interagency trade organization established under section 242(a) of the Trade Expansion Act of 1962, and shall consult with and be advised by such organization in the performance of the functions of the Administrator; and

(10) carry out the functions transferred to the Administrator by section 202.

(b) It is the sense of Congress that the Administrator shall—

(1) be the senior representative on any body that the President may establish for the purpose of providing to the President advice on overall economic policies in which international trade matters predominate; and

(2) be included as a participant in all economic summits and other international meetings at which international trade is a major topic.

TECHNICAL AMENDMENTS

SEC. 205. (a) Section 5312 of title 5, United States Code (as amended by section 161(c) of this Act) is further amended by striking out the item relating to the United States Trade Representative and inserting in lieu thereof the following:

"United States Trade Administrator.".

(b) Section 5314 of such title (as amended by section 161(e) of this Act) is further amended by striking out the item relating to the Deputy United States Trade Representatives and inserting in lieu thereof the following:

"Deputy Trade Administrator for Trade Programs.

"Deputy Trade Administrator for Economic Policy.

"Deputy Trade Administrator for Trade Policy and Negotiation.

"Deputy Trade Administrator for Management.

"Deputy Trade Administrator.".

(c) Section 141(c) of the Trade Act of 1974 is amended by striking out paragraph (1) and by redesignating paragraphs (2) and (3) as paragraphs (1) and (2), respectively.

TITLE III—TRANSITIONAL, SAVINGS, AND CONFORMING PROVISIONS

TRANSFER AND ALLOCATIONS OF APPROPRIATIONS AND PERSONNEL

SEC. 301. Except as otherwise provided in this Act, the personnel employed in connection with, and the assets, liabilities, contracts, property, records, and unexpended balances of appropriations, authorizations, allocations, and other funds employed, used, held, arising from, available to, or to be made available in connection with the functions transferred to the Secretary or the Administrator by this Act, subject to section 1531 of title 31, United States Code, shall be transferred to the Secretary or the Administrator, as the case may be. Unexpended funds transferred pursuant to this section shall be used only for the purposes for which the funds were originally authorized and appropriated.

INCIDENTAL TRANSFERS

SEC. 302. (a) The Director of the Office of Management and Budget, at such time or times as the Director shall provide, is authorized to make such determinations as may be necessary with regard to the functions transferred by this Act, and to make such additional incidental dispositions of personnel, assets, liabilities, grants, contracts, property, records, and unexpended balances of appropriations, authorizations, allocations, and other funds held, used, arising from, available to, or to be made available in connection with such functions, as may be necessary to carry out the provisions of this Act. The Director shall provide for the termination of the affairs of all entities terminated by this Act and for such further measures and dispositions as may be necessary to effectuate the purposes of this Act.

(b) After consultation with the Director of the Office of Personnel Management, the Director of the Office of Management and Budget is authorized, at such times as the Director of the Office of Management and Budget may provide, to make such determinations as may be necessary with regard to the transfer of positions within the Senior Executive Service in connection with the functions transferred by this Act.

EFFECT ON PERSONNEL

SEC. 303. (a) Except as otherwise provided by this Act, the transfer pursuant to this Act of full-time personnel (except special Government employees) and part-time personnel holding permanent positions shall not cause any such employee to be separated or reduced in grade or compensation for one year after the date of transfer of such employee under this Act.

(b) Any person who, on the day preceding the effective date of this Act, held a position compensated in accordance with the Executive Schedule prescribed in chapter 53 of title 5, United States Code, and who, without a break in service, is appointed in a Federal agency to which functions are transferred by this Act to a position having duties comparable to the duties performed immediately preceding such appointment shall continue to be compensated in such new position at not less than the rate provided for such previous position, for the duration of the service of such person in such new position.

(c) Positions whose incumbents are appointed by the President, by and with the advice and consent of the Senate, the functions of which are transferred by this Act, shall terminate on the effective date of this Act.

SAVINGS PROVISIONS

SEC. 304. (a) All orders, determinations, rules, regulations, permits, contracts, certificates, licenses, and privileges that—

(1) have been issued, made, granted, or allowed to become effective by the President, any Federal agency or official thereof, or by a court of competent jurisdiction, in the performance of functions which are transferred by this Act; and

(2) are in effect when this Act takes effect,

shall continue in effect according to their terms until modified, terminated, superseded, set aside, or revoked in accordance with law by the President, the Secretary, the Administrator, a court of competent jurisdiction, or by operation of law.

(b)(1) The provisions of this Act shall not affect any proceedings, including notices of proposed rule making, or any application for any license, permit, certificate, or financial assistance pending on the effective date of this Act before the Department of Commerce, or any office thereof with respect to functions transferred by this Act; but such proceedings or applications, to the extent that they relate to functions transferred, shall be continued. Orders shall be issued in such proceedings, appeals shall be taken therefrom, and payments shall be made under such orders, as if this Act had not been enacted; and orders issued in any such proceedings shall continue in effect until modified, terminated, superseded, or revoked by the Secretary, the Administrator, a court of competent jurisdiction, or by operation of law. Nothing in this subsection prohibits the discontinuance or modification of any such proceeding under the same terms and conditions and to the same extent that such proceeding could have been discontinued or modified if this Act had not been enacted.

(2) The Secretary of Commerce, the Administrator, and the Secretary are authorized to issue regulations providing for the orderly transfer of proceedings continued under paragraph (1).

(c) Except as provided in subsection (e)—

(1) the provisions of this Act do not affect actions commenced prior to the effective date of this Act, and

(2) in all such actions, proceedings shall be had, appeals taken, and judgments rendered in the same manner and effect as if this Act had not been enacted.

(d) No action or other proceeding commenced by or against any officer in his official capacity as an officer of the

Department of Commerce with respect to functions transferred by this Act shall abate by reason of the enactment of this Act. No cause of action by or against the Department of Commerce with respect to functions transferred by this Act, or by or against any officer thereof in his official capacity, shall abate by reason of the enactment of this Act. Causes of action and actions with respect to a function transferred by this Act, or other proceedings may be asserted by or against the United States, the Secretary, or the Administrator, as may be appropriate, and, in an action pending when this Act takes effect, the court may at any time, on its own motion or that of any party, enter an order which will give effect to the provisions of this subsection.

(e) If, before the date on which this Act takes effect, the Department of Commerce or any officer thereof in his official capacity, is a party to an action, and under this Act any function of such Department or officer is transferred to the Secretary or the Administrator, then such action shall be continued with the Secretary or the Administrator, as the case may be, substituted or added as a party.

(f) Orders and actions of the head of a Federal agency in the exercise of functions transferred to the head of such agency by this Act shall be subject to judicial review to the same extent and in the same manner as if such orders and actions had been by the Department of Commerce or any office or officer thereof, in the exercise of such functions immediately preceding their transfer. Any statutory requirements relating to notice, hearings, action upon the record, or administrative review that apply to any function transferred by this Act shall apply to the exercise of such function by the Secretary or the Administrator.

SEPARABILITY

SEC. 305. If a provision of this Act or its application to any person or circumstance is held invalid, neither the remainder of this Act nor the application of the provision to other persons or circumstances shall be affected.

REFERENCE

SEC. 306. With respect to any function transferred to the Secretary or the Administrator by this Act and exercised after the effective date of this Act, reference in any other Federal law to—

(1) the Secretary of Commerce; or

(2) the Department of Commerce or any officer or office thereof,

shall be considered to refer to the Secretary or the Administrator, as the case may be.

TRANSITION

SEC. 307. With the consent of the Secretary of Commerce, the Secretary or the Administrator is authorized to utilize—

(1) the services of such officers, employees, and other personnel of the Department of Commerce, with respect to functions transferred to the Secretary or the Administrator by this Act; and

(2) funds appropriated to such functions or offices for such period of time as may reasonably be needed to facilitate the orderly implementation of this Act.

TERMINATION OF THE DEPARTMENT OF COMMERCE

SEC. 308. The Department of Commerce is terminated.

TITLE IV—MISCELLANEOUS

EFFECTIVE DATE

SEC. 401. (a) This Act shall take effect one hundred and twenty days after the date of enactment of this Act, except that—

(1) section 307 shall take effect on the date of enactment; and

(2) at any time after the date of enactment of this Act—

(A) the officers provided for in this Act may be nominated and appointed, as provided in this Act;

(B) the Secretary of Commerce, the Administrator, and the Secretary may promulgate regulations under section 304(b)(2).

(b) Funds available to the Department of Commerce (or any official or component thereof), with respect to the functions transferred by this Act, may be used, with approval of the Director of the Office of Management and Budget, to pay the compensation and expenses of an officer appointed under subsection (a)(2)(A) who will carry out such functions until funds for that purpose are otherwise available.

INTERIM APPOINTMENTS

SEC. 402. (a) If one or more officers required by this Act to be appointed by and with the advice and consent of the Senate have not entered upon office on the effective date of this Act and notwithstanding any other provision of law, the President may designate any officer who was appointed by and with the advice and consent of the Senate, and who was such an officer on the day before the effective date of this Act, to act in the office until it is filled as provided by this Act.

(b) Any officer acting in an office pursuant to subsection (a) shall receive compensation at the rate prescribed by this Act for such office.

AUTHORIZATION OF APPROPRIATIONS

SEC. 403. There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act (other than part C of title I). Amounts appropriated under this section shall be available until expended.

TEXT OF S. 1233 AS REPORTED

II

Calendar No. 200

100TH CONGRESS
1ST SESSION

S. 1233

[Report No. 100–82]

To establish as an executive department of the Government a Department of Industry and Technology, to establish within that Department the Advanced Civilian Technology Agency, to establish the United States Trade Administration, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 19 (legislative day, MAY 13), 1987

Mr. GLENN introduced the following bill; which was read twice and referred to the Committee on Governmental Affairs

JUNE 23, 1987

Reported by Mr. GLENN, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

A BILL

To establish as an executive department of the Government a Department of Industry and Technology, to establish within that Department the Advanced Civilian Technology Agency, to establish the United States Trade Administration, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

* * * * * * *

TITLE I—TRADE AND TECHNOLOGY POLICY

Subtitle A—Department of Industry and Technology

PART I—GENERAL PROVISIONS

SEC. 101. SHORT TITLE.

This title may be cited as the "Economic Competitiveness, International Trade, and Technology Development Act of 1987".

SEC. 102. FINDINGS.

The Congress finds and declares that—

(1) the expansion of United States participation in international trade through aggressive promotion and marketing of American goods and services and accelerated technology development and application are principal national goals;

(2) the economy of the United States is so inextricably linked with the international economic system that all domestic economic sectors are influenced by the dynamics of global trade and investment;

(3) the expansion of United States participation in international trade and investment will improve the general welfare of the people of the United States by increasing demand for American products and services,

creating jobs, and increasing the gross national product;

(4) business, labor, and all levels of government must join efforts to place high priority on developing methods and policies to achieve the goals described in paragraph (1);

(5) the Federal Government can enhance the capability of United States businesses to compete in foreign markets by acting to (A) reduce political and economic barriers to sales and investments by such businesses, (B) promote American goods and services in foreign countries, (C) encourage aggressive participation by the private sector in the international marketplace, and (D) develop policies to enhance productivity and the development and application of technological advances;

(6) to achieve the important goals described in paragraph (1) through the means specified in paragraph (5), the United States must establish a cohesive national policy to (A) restore the competitive edge to United States industries, and (B) provide appropriate incentives for the development and application of advances in technology;

(7) effective and efficient Government action to enhance the capability of United States businesses to

compete in foreign markets requires coordination and development and implementation of Government policies relating to (A) the international trade and investment, and (B) the technology interests of the United States;

(8) a lack of analytical capability and knowledge concerning the competitive position and prospects of American industries and foreign industries greatly hampers or delays the ability of the United States to formulate responsible policies regarding economic competitiveness, technology development and application, and trade;

(9) government organization should proceed from the recognition that (A) there is a critical need to link policies which enhance industrial competitiveness and technology development and application, and (B) analyses and policies regarding our domestic markets should be integrated with analyses and policies regarding the international markets in which our businesses compete;

(10) helping to foster the development of new technology and its application in United States industries is a proper and necessary role for government, working with the private sector;

(11) the present organizational structure of Government administration of international trade and investment activities, industrial promotion and growth activities, and technology advancement activities is lacking in the elements necessary to carry out the goals specified in paragraph (1) and is inconsistent with the findings specified in paragraphs (9) and (10); and

(12) the reorganization of Government functions relating to international trade and investment, industrial promotion and growth, and technology development and application, through the establishment of a Department of Industry and Technology, an Advanced Civilian Technology Agency, and a United States Trade Administration, will eliminate the inconsistencies described in paragraph (11) and will substantially enhance the economic well-being of the American people.

SEC. 103. DEFINITIONS.

As used in this title, unless otherwise provided or indicated by the context—

(1) the term "Administration" means the United States Trade Administration established by section 161;

(2) the term "administrative and support functions" means legal functions, investigative functions,

budget preparation and analysis functions, administrative functions, public information functions, and congressional relations functions carried out by the Department and such other support services as may be determined by the Secretary;

(3) the term "Advisory Board" means the National Advanced Civilian Technology Advisory Board established by section 123;

(4) the term "Agency" means the Advanced Civilian Technology Agency established by section 121;

(5) the term "Department" means the Department of Industry and Technology;

(6) the term "executive department" has the meaning given to the term "Executive department" by section 101 of title 5, United States Code;

(7) the term "Federal agency" has the meaning given to the term "agency" by section 551(1) of such title;

(8) the term "function" means any duty, obligation, power, authority, responsibility, right, privilege, activity, or program;

(9) the term "office" includes any office, administration, agency, institute, unit, organizational entity, or component thereof; and

(10) the term "Secretary" means the Secretary of Industry and Technology.

PART II—ESTABLISHMENT AND ORGANIZATION

SEC. 111. ESTABLISHMENT OF DEPARTMENT.

There is established an executive department to be known as the Department of Industry and Technology.

SEC. 112. PRINCIPAL OFFICERS.

(a) SECRETARY.—The Department shall be administered by a Secretary of Industry and Technology, who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) DEPUTY SECRETARY.—

(1) There shall be in the Department a Deputy Secretary of Industry and Technology, who shall be appointed by the President, by and with the advice and consent of the Senate. The Deputy Secretary shall perform such functions as the Secretary may prescribe.

(2) The Deputy Secretary shall act for and exercise the functions of the Secretary during the absence or disability of the Secretary or in the event the office of Secretary becomes vacant. The Deputy Secretary shall act for and exercise the functions of the Secretary until the absence or disability of the Secretary no longer exists or a successor to the Secretary has been

appointed by the President and confirmed by the Senate.

SEC. 113. FUNCTIONS OF THE SECRETARY.

In addition to the functions transferred to and assigned to the Secretary by this subtitle, such other functions as the President may assign or delegate to the Secretary, and such other functions as the Secretary may, after the effective date of this title, be required to carry out by law, the Secretary shall—

(1) seek and promote new opportunities for American products and services to compete in the world marketplace;

(2) assist businesses in developing export markets;

(3) support State governments involved in attracting international investment and expanding foreign markets for goods and services produced in such States;

(4) analyze domestic as well as international economic trends and developments in order to understand and foster the conditions that enhance productivity and advances in technology development and application;

(5) serve as the principal advisor to the President on government policies designed to contribute to the enhancement of the ability of American industry and services to compete in international markets;

(6) serve as the principal advisor to the President in identifying and assessing the consequences of any government policies which adversely affect, or have the potential to adversely affect, the competitiveness of United States industries and services;

(7) promote cooperation between business, labor, and government in order to—

(A) improve industrial performance, technology development and application, and the ability of American industries to compete in international markets; and

(B) facilitate consultation and communication between the Federal Government and the private sector concerning domestic industrial performance and prospects as well as the performance and prospects of foreign competitors;

(8) exercise responsibility, through the Stevenson-Wydler Technology Innovation Act of 1980 and other policies, for the Federal Government's role in encouraging technological innovation for industrial and commercial purposes;

(9) serve as the principal advisor to the President in formulating and carrying out policies which advance the development and application of technology to civilian goods and services;

(10) promote and facilitate the development and application of new technology in order to provide new products and materials for the marketplace and new processes to improve the productivity and quality of goods and services;

(11) carry out the functions specified in part III;

(12) develop policies and practices to encourage technological considerations during the development of economic policies and activities for the Nation;

(13) assist industry to consider the role of, and the implications of, advances in domestic and foreign technology;

(14) monitor industrial technology development programs, including cooperative research and development centers and cooperative technology programs;

(15) promote and undertake the development, collection, analysis, and dissemination of—

(A) data and information relating to the development and use of foreign and domestic technology; and

(B) economic and technological information relating to the activities of the Secretary and the Department;

(16) assist interested trade associations, State technology agencies, labor organizations, and universi-

ties to disseminate information on new product and process technologies to interested businesses and other entities throughout the United States;

(17) develop, in cooperation with other appropriate Federal agencies, long-range programs to promote American international economic and technology policy interests; and

(18) mobilize and facilitate the participation of American private capital and skills in the development of the economic and social progress of friendly developing countries and areas.

SEC. 114. OFFICE OF THE UNDER SECRETARY FOR INDUSTRY.

(a) ESTABLISHMENT.—

(1) There shall be in the Department the Office of the Under Secretary for Industry. The Office of the Under Secretary for Industry shall be administered by the Under Secretary of Industry and Technology for Industry, who shall be appointed by the President, by and with the advice and consent of the Senate. Such Office shall be composed of—

(A) the Office of Economic Analysis established by subsection (b);

(B) the Office of Trade Development established by subsection (c);

(C) the United States and Foreign Commercial Service established by subsection (d);

(D) the Office of Economic Development established by subsection (e);

(E) the Bureau of the Census established by subsection (f);

(F) the Minority Business Development Agency established by subsection (g);

(G) the Office of Small Business Trade Remedy Assistance established by subsection (h); and

(H) the offices specified in paragraph (2).

(2)(A) There shall be within the Office of the Under Secretary for Industry the Office of the Chief Economist. Such Office shall be headed by the Chief Economist, who shall be appointed by the Secretary. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Chief Economist, shall carry out all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Chief Economist of the Department of Commerce.

(B) There shall be within the Office of the Under Secretary for Industry the Office of Strategic Resources. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Office of Strategic Resources, shall carry out all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Office of Strategic Resources of the Department of Commerce.

(3) The Secretary, through the Under Secretary of Industry and Technology for Industry, shall—

(A) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this title, were performed by the Secretary of Commerce through the Under Secretary of Commerce for International Trade; and

(B) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this title, were performed by the Secretary of Commerce through the Under Secretary of Commerce for Economic Af-

fairs (other than functions described in subsections (a)(2)(B), (a)(2)(C), and (b)(2) of section 115).

(b) Office of Economic Analysis.—There shall be in the Department the Office of Economic Analysis. Such Office shall be administered by the Director of Economic Analysis, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of Economic Analysis, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of—

(1) the Director of the Bureau of Economic Analysis of the Department of Commerce;

(2) the Office of Economic Conditions of the Department of Commerce; and

(3) the Office of Business Analysis of the Department of Commerce.

(c) Office of Trade Development.—There shall be in the Department the Office of Trade Development. Such Office shall be administered by the Director of Trade Devel-

opment, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of Trade Development, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce for Trade Development.

(d) UNITED STATES AND FOREIGN COMMERCIAL SERVICE.—There shall be in the Department the United States and Foreign Commercial Service. Such Service shall be administered by the Director General of the United States and Foreign Commercial Service, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director General of the United States and Foreign Commercial Service, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direc-

tion of the Director General of the United States and Foreign Commercial Service of the Department of Commerce.

(e) OFFICE OF ECONOMIC DEVELOPMENT.—There shall be in the Department the Office of Economic Development. Such Office shall be administered by the Assistant Secretary of Industry and Technology for Economic Development, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Assistant Secretary of Industry and Technology for Economic Development, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce for Economic Development.

(f) BUREAU OF THE CENSUS.—There shall be in the Department the Bureau of the Census. Such Bureau shall be administered by the Director of the Census, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of the Census, shall perform all functions (other than administrative and support functions) transferred to the Secretary by

section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the Census of the Department of Commerce.

(g) MINORITY BUSINESS DEVELOPMENT AGENCY.—There shall be in the Department the Minority Business Development Agency. Such Agency shall be administered by a Director, who shall be appointed by the Secretary. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of the Minority Business Development Agency, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the Minority Business Development Agency.

(h) OFFICE OF SMALL BUSINESS TRADE REMEDY ASSISTANCE.—

(1) There is established in the Department the Office of Small Business Trade Remedy Assistance. The Office shall be administered by a Director of Small Business Trade Remedy Assistance, who shall be appointed by the President, by and with the advice

and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Industry and the Director of Small Business Trade Remedy Assistance, shall carry out all functions transferred to the Secretary by section 132.

(2) The Director of Small Business Trade Remedy Assistance shall—

(A) provide full information to small businesses concerning—

(i) remedies available to them under the trade laws; and

(ii) the petition and application procedures, and the appropriate filing dates, with respect to such remedies; and

(B) provide assistance to small businesses in preparing petitions and applications to obtain such remedies.

(3)(A) The Director of Small Business Trade Remedy Assistance shall establish and maintain a system for paying reasonable expenses incurred by an eligible small business in connection with any administrative proceeding conducted under any trade law if the Director determines that such small business is in need of assistance in paying such expenses.

(B) The Director shall prepare a written evaluation of any request for attorneys' fees, consultant fees, and other reasonable expenses incurred by an eligible small business in connection with an administrative proceeding conducted under any trade law. Such document shall contain an evaluation, for each such expense, of—

(i) the sufficiency of the documentation of the expense;

(ii) the need or justification for the underlying item; and

(iii) the reasonableness of the amount of money requested.

(C) Payments may be made to an eligible small business under subparagraph (A) with respect to only one administrative proceeding per fiscal year.

(D) With respect to any proceeding, payment for reasonable expenses under subparagraph (A) may be made—

(i) in any case in which the amount of such expenses does not exceed $200,000, in an amount not to exceed 50 percent of such expenses, and

(ii) in any case in which the amount of such expenses exceeds $200,000, in an amount not to exceed the sum of—

(I) 25 percent of the amount of such expenses in excess of $200,000 but not more than $400,000; plus

(II) the amount payable under clause (i).

(E) No payment shall be made under subparagraph (A) with respect to any proceeding which the Director of Small Business Trade Remedy Assistance determines to be frivolous or for purposes of harassment or delay.

(F) Payments may be made under subparagraph (A) with respect to any proceeding only after determinations made in such proceeding have become final and may not be appealed.

(4) For purposes of paragraph (3)—

(A) The term "reasonable expenses" includes attorneys' fees and expenses for data collection and the services of consultants.

(B) The term "eligible small business" means any business concern which, in the agency's judgment, due to its small size, has neither adequate internal resources nor financial ability to obtain qualified outside assistance in preparing and filing petitions and applications for remedies and benefits under trade laws. In determining

whether a business concern is an eligible small business, the agency may consult with the Small Business Administration, and shall consult with any other agency that has provided assistance under subsection (b) to that business concern. An agency decision regarding whether a business concern is an eligible small business for purposes of this section is not reviewable by any other agency or by any court.

(C) The term "trade laws" means—

(i) chapter 1 of title II of the Trade Act of 1974 (19 U.S.C. 2251 et seq., relating to relief caused by import competition);

(ii) chapters 2 and 3 of such title II (relating to adjustment assistance for workers and firms);

(iii) chapter 1 of title III of the Trade Act of 1974 (19 U.S.C. 2411 et seq., relating to relief from foreign import restrictions and export subsidies);

(iv) title VII of the Tariff Act of 1930 (19 U.S.C. 1671 et seq., relating to the imposition of countervailing duties and antidumping duties);

(v) section 232 of the Trade Expansion Act of 1962 (19 U.S.C. 1862, relating to the safeguarding of national security); and

(vi) section 337 of the Tariff Act of 1930 (19 U.S.C. 1337, relating to unfair practices in import trade).

(5) To carry out paragraph (3), there are authorized to be appropriated not in excess of $3,000,000 for fiscal year 1989 and each succeeding fiscal year.

(6) The Director of Small Business Trade Remedy Assistance shall submit an annual report on the operation of the Office to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives. Such report shall include recommendations for legislation necessary to enable the Office to carry out its functions.

SEC. 115. OFFICE OF THE UNDER SECRETARY FOR TECHNOLOGY.

(a) ESTABLISHMENT.—

(1) There shall be in the Department the Office of the Under Secretary for Technology. Such Office shall be administered by the Under Secretary of Industry and Technology for Technology, who shall be appointed by the President, by and with the advice and consent of the Senate. Such Office shall be composed of—

(A) the Advanced Civilian Technology Agency established by part III;

(B) the Office of Technology Information established by subsection (b);

(C) the Patent and Trademark Office established by subsection (c);

(D) the National Bureau of Standards established by subsection (d); and

(E) the Office of Communications and Information established by subsection (e).

(2) The Secretary, through the Under Secretary of Industry and Technology for Technology, shall—

(A) carry out the functions of the Secretary described in paragraphs (7)(A), (8), (9), (10), (11), (13), (14), (15)(A), and (16) of section 113;

(B) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this title, were carried out by the Secretary of Commerce through the Assistant Secretary of Commerce for Productivity, Technology, and Innovation; and

(C) carry out all functions transferred to the Secretary under section 131 which, on the day before the effective date of this title, were carried out by the Secretary of Commerce through the

Under Secretary of Commerce for Economic Affairs and which relate directly to the management by such Under Secretary of the Office of the Assistant Secretary of Commerce for Productivity, Technology, and Innovation.

(b) OFFICE OF TECHNOLOGY INFORMATION.—

(1) There shall be in the Department the Office of Technology Information. Such Office shall be administered by the Assistant Secretary of Industry and Technology for Technology Information, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Assistant Secretary of Industry and Technology for Technology Information, shall carry out the functions of the Secretary described in section 113(15)(A).

(2) There shall be in the Office of Technology Information the National Technical Information Service. The National Technical Information Service shall be headed by the Director of the National Technical Information Service, who shall be appointed by the Secretary. The Secretary, through the Assistant Secretary of Industry and Technology for Technology Information and the Director of the National Technical Information Service, shall perform all functions (other than administrative and support functions) transferred to

the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the National Technical Information Service of the Department of Commerce.

(3)(A) There shall be in the Office of Technology Information the Office of International Technology Monitoring. Such Office shall be headed by a Director of International Technology Monitoring, who shall be appointed by the Secretary.

(B) The Secretary, through the Assistant Secretary of Industry and Technology for Technology Information and the Director of International Technology Monitoring, shall—

(i) establish a clearinghouse to coordinate and disseminate information obtained by the Federal Government regarding developments in science and technology throughout the world;

(ii) work with other Federal agencies to identify emerging areas of technology throughout the world;

(iii) identify the requirements of the public and private sector for information concerning sci-

entific and technological information and disseminate such requirements to all Federal agencies;

(iv) develop and administer a program involving the identification of the ownership of United States patents, including an identification of each firm owning such a patent and the country in which each owner of such a patent resides or does business;

(v) determine trends relating to patents throughout the world;

(vi) assure regular reviews by relevant industry sector advisory committees and experts at Federal laboratories; and

(vii) assure broad private sector knowledge of, and access to, findings, data, and other information made or acquired by the Director in carrying out this paragraph.

(C) All Federal agencies shall coordinate with the Director of the Office of International Technology Monitoring the activities of such agencies with respect to the collection of information regarding technological and scientific developments worldwide.

(D) There are authorized to be appropriated for fiscal year 1989 not to exceed $2,000,000 to carry out the provisions of this paragraph.

(c) Patent and Trademark Office.—There shall be in the Department the Patent and Trademark Office. The Patent and Trademark Office shall be administered by the Commissioner for Patents and Trademarks, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Technology and the Commissioner for Patents and Trademarks, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce and Commissioner for Patents and Trademarks.

(d) National Bureau of Standards.—There shall be in the Department the National Bureau of Standards. The National Bureau of Standards shall be administered by the Director of the National Bureau of Standards, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Technology and the Director of the National Bureau of Standards, shall perform all functions (other than administrative and support funcuions) transferred to the Secretary by section 131 that

were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Director of the National Bureau of Standards of the Department of Commerce.

(e) OFFICE OF COMMUNICATIONS AND INFORMATION.—There shall be in the Department the Office of Communications and Information. The Office of Communications and Information shall be administered by the Assistant Secretary of Industry and Technology for Communications and Information, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology and the Assistant Secretary of Industry and Technology for Communications and Information, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Assistant Secretary of Commerce for Communications and Information.

SEC. 116. UNITED STATES TRAVEL AND TOURISM ADMINISTRATION.

There shall be in the Department the United States Travel and Tourism Administration. The United States Travel and Tourism Administration shall be administered by the Under Secretary of Industry and Technology for Travel and Tourism, who shall be appointed by the President, by and with the advice and consent of the Senate. The Secretary, through the Under Secretary of Industry and Technology for Travel and Tourism, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce, as the case may be, through or under the direction of the Under Secretary of Commerce for Travel and Tourism.

SEC. 117. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

(a) ESTABLISHMENT.—There shall be in the Department the National Oceanic and Atmospheric Administration. The National Oceanic and Atmospheric Administration shall be administered by the Under Secretary of Industry and Technology for Oceans and Atmosphere, who shall also serve as Administrator of the National Oceanic and Atmospheric Administration, and who shall be appointed by the President, by and with the advice and consent of the Senate. The Secre-

tary, through the Under Secretary of Industry and Technology for Oceans and Atmosphere, shall perform all functions (other than administrative and support functions) transferred to the Secretary by section 131 that were, on the day before the effective date of this title, performed by the Secretary of Commerce or the Department of Commerce through or under the direction of the Under Secretary of Commerce for Oceans and Atmosphere.

(b) DEPUTY ADMINISTRATOR.—There shall be in the Department an Assistant Secretary of Industry and Technology for Oceans and Atmosphere, who shall serve as Deputy Administrator of the National Oceanic and Atmospheric Administration.

SEC. 118. ADDITIONAL OFFICERS.

(a) ASSISTANT SECRETARIES.—There shall be in the Department two additional Assistant Secretaries of Industry and Technology, who shall be appointed by the President, by and with the advice and consent of the Senate. Each additional Assistant Secretary of Industry and Technology shall perform such functions as the Secretary may prescribe.

(b) GENERAL COUNSEL.—There shall be in the Department a General Counsel, who shall be appointed by the President, by and with the advice and consent of the Senate. The General Counsel shall provide legal assistance to the

Secretary concerning the activities, programs, and policies of the Department.

(c) INSPECTOR GENERAL.—There shall be in the Department an Inspector General who shall be appointed in accordance with the Inspector General Act of 1978, as amended by section 161(h) of this Act.

PART III—ADVANCED CIVILIAN TECHNOLOGY AGENCY

SEC. 121. ESTABLISHMENT OF AGENCY.

There shall be in the Department the Advanced Civilian Technology Agency. The Agency shall be administered by an Administrator, who shall be appointed by the President, by and with the advice and consent of the Senate.

SEC. 122. FUNCTIONS OF AGENCY.

(a) IN GENERAL.—The Secretary, through the Under Secretary of Industry and Technology for Technology and the Administrator of the Agency, shall—

(1) promote and assist in the development of new technologies and the application of advanced technological capabilities to civilian goods and services;

(2) contribute to United States economic competitiveness by supporting research by businesses, academic institutions, and private laboratories to advance civilian technological developments and to facilitate the

more rapid commercialization of products, processes, and services based on such developments; and

(3) make grants and enter into contracts and cooperative agreements in accordance with section 124.

(b) A*DMINISTRATION.—In carrying out this part, the Secretary, through the Administrator of the Agency, shall—*

(1) coordinate activities of the Agency with activities conducted by the Defense Advanced Research Projects Agency and the National Science Foundation;

(2) obtain the advice and assistance of the heads of Federal agencies involved in the conduct of research and the heads of Federal laboratories; and

(3) utilize the expertise and abilities of private business concerns and research and development organizations designated under section 124.

SEC. 123. NATIONAL ADVANCED CIVILIAN TECHNOLOGY ADVISORY BOARD.

(a) E*STABLISHMENT.—There shall be in the Agency the National Advanced Civilian Technology Advisory Board. The Advisory Board shall provide advice to the Secretary, the Under Secretary of Industry and Technology for Technology, and the Administrator of the Agency with respect to the policies, programs, and activities of the Agency.*

(b) M*EMBERSHIP.—*

(1) The Advisory Board shall consist of—

(A) twenty-one members appointed by the Secretary in accordance with the requirements of paragraph (2); and

(B) the Director of the Defense Advanced Research Projects Agency and the Director of the National Science Foundation, who shall be ex officio members.

(2)(A) Members of the Advisory Board appointed under paragraph (1)(A) shall—

(i) be broadly representative of the various sectors of United States industries, including manufacturing, advanced technology services, finance, transportation, energy, materials production, telecommunications, biotechnology, and medicine; and

(ii) include representatives of small, medium, and large businesses.

(B) At least 14 members of the Advisory Board shall be representatives of industries and the remaining members of the Advisory Board shall be representatives of academic institutions, State and local governments, and nonprofit private organizations.

(C) In appointing members to the Advisory Board, the Secretary shall consult with representatives of various groups representing business concerns.

(c) APPOINTMENT OF FIRST MEMBERS.—Members of the Advisory Board shall be appointed by the Secretary within 60 days after the effective date of this title.

(d) TERM OF MEMBERSHIP.—Each member of the Advisory Board appointed under subsection (b)(1)(A) shall be appointed for a term of three years, except that of the members first appointed, seven shall be appointed for a term of one year, seven shall be appointed for a term of two years, and seven shall be appointed for a term of three years, as designated by the Secretary at the time of appointment.

(e) VACANCIES.—A vacancy in the Advisory Board shall be filled in the same manner as the original appointment was made. Any member appointed to fill a vacancy for an unexpired term shall be appointed for the remainder of such term. A member of the Advisory Board may serve after the expiration of the member's term until a successor has taken office.

(f) EFFECT OF VACANCIES.—A vacancy in the Advisory Board shall not affect its powers.

(g) CHAIRMAN.—The members of the Advisory Board shall elect a Chairman from among the members of the Advisory Board.

(h) QUORUM.—Eleven members of the Advisory Board shall constitute a quorum.

(i) MEETINGS.—The Advisory Board shall hold its first meeting on a date specified by the Secretary which is not later than 90 days after the effective date of this title. Thereafter, the Advisory Board shall meet at the call of the Chairman or a majority of its members, but shall meet at least twice each year.

(j) COMPENSATION AND EXPENSES.—

(1) Each member of the Advisory Board shall serve without compensation.

(2) While away from their homes or regular places of business in the performance of duties for the Advisory Board, all members of the Advisory Board shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under sections 5702 and 5703 of title 5, United States Code.

SEC. 124. GRANTS, CONTRACTS, AND COOPERATIVE AGREEMENTS.

(a) AUTHORITY.—

(1) The Secretary, through the Administrator of the Agency, shall make grants and enter into contracts and cooperative agreements with research and development organizations in order to support long-term projects for (A) research and applications thereof concerning the development of new or advanced technology

of significant potential value to the civilian sector of the United States economy, and (B) research concerning the commercial adaptation of such technology. Grants, contracts, and cooperative agreements under this section shall be designed to support projects which are high risk and which have high potential for eventual and substantial commercial application.

(2) In order to receive a grant, contract, or cooperative agreement under this section, a research and development organization—

(A) shall demonstrate to the Secretary significant and substantial experience in technology development and management in the area in which the grant, contract, or cooperative agreement is being made; and

(B) may consist of a consortia of private firms, academic institutions, or public or nonprofit entities, or any combination thereof.

(3) During any period when an individual or an officer or employee of a private firm, academic institution, or public or nonprofit private entity is a member of the Advisory Board, such individual, officer, or employee, and such firm, institution, or entity, may not receive a grant, contract, or cooperative agreement under this section.

(b) APPLICATIONS.—No grant may be made and no contract or cooperative agreement may be entered into under this section unless an application therefor is submitted to the Secretary, through the Administrator of the Agency. Such application shall be submitted in such form, at such time, and containing such information as the Secretary may by regulation prescribe.

(c) FEDERAL SHARE.—The Secretary, through the Administrator of the Agency, shall determine the Federal share and the non-Federal share of the costs of each project supported with a grant, contract, or cooperative agreement under this section.

(d) RECOVERY PROVISIONS.—Each grant agreement, contract, or cooperative agreement entered into under subsection (a) shall contain such provisions as the Secretary considers appropriate to enable the United States to recover all or part of the funds provided to a research and development organization under the grant, contract, or cooperative agreement in any case in which the technology developed under such grant, contract, or cooperative agreement results in long-term profits for such organization or the participants in such organization.

(e) LIMITATION.—The authority of the Secretary to enter into contracts under this section shall be to such extent

or in such amounts as may be provided in appropriation Acts.

SEC. 125. AUTHORIZATION OF APPROPRIATIONS.

To carry out this part, there are authorized to be appropriated $80,000,000 for fiscal year 1989, $160,000,000 for fiscal year 1990, and $240,000,000 for fiscal year 1991.

PART IV—TRANSFERS TO THE DEPARTMENT

SEC. 131. TRANSFERS FROM THE DEPARTMENT OF COMMERCE.

Except for functions transferred by section 164, there are transferred to the Secretary—

(1) all functions of the Secretary of Commerce;

(2) all functions of the Department of Commerce; and

(3) all functions of, and all functions performed under the direction of, all officers and employees of the Department of Commerce.

SEC. 132. TRANSFER FROM THE UNITED STATES INTERNATIONAL TRADE COMMISSION.

There are transferred to the Secretary all functions of the Trade Remedy Assistance Office of the United States International Trade Commission.

PART V—ADMINISTRATIVE PROVISIONS

SEC. 141. PERSONNEL PROVISIONS.

(a) APPOINTMENTS.—The Secretary may appoint and fix the compensation of such officers and employees, includ-

ing investigators, attorneys, and administrative law judges, as may be necessary to carry out the functions of the Secretary and the Department. Except as otherwise provided by law, such officers and employees shall be appointed in accordance with the civil service laws and their compensation fixed in accordance with title 5, United States Code.

(b) SENIOR EXECUTIVE SERVICE.—

(1) At the request of the Secretary, the Director of the Office of Personnel Management shall, under section 5108 of title 5, United States Code, provide for the establishment in each of the grade levels GS–16, GS–17, and GS–18, and in the Senior Executive Service, of a number of positions in the Department equal to the number of positions in that grade level which were used primarily for the performance of functions transferred by this subtitle and which were assigned and filled on the day before the effective date of this title.

(2) Appointments to positions provided for under this subsection may be made without regard to the provisions of section 3324 of title 5, United States Code, if the individual appointed in such position is an individual who is transferred in connection with the transfer of functions and offices under this subtitle and, on the day before the effective date of this title, holds a

position and has duties comparable to those of the position to which appointed under this subsection.

(3) The authority under this subsection with respect to any position established at the grade level GS–16, GS–17, or GS–18 shall terminate when the person first appointed to fill such position ceases to hold such position.

(4) For purposes of section 414(a)(3)(A) of the Civil Service Reform Act of 1978, an individual appointed under this subsection shall be deemed to occupy the same position as the individual occupied on the day before the effective date of this title.

(c) EXPERTS AND CONSULTANTS.—The Secretary may obtain the services of experts and consultants in accordance with section 3109 of title 5, United States Code, and compensate such experts and consultants for each day (including traveltime) at rates not in excess of the rate of pay for grade GS–18 of the General Schedule under section 5332 of such title. The Secretary may pay experts and consultants who are serving away from their homes or regular place of business travel expenses and per diem in lieu of subsistence at rates authorized by sections 5702 and 5703 of such title for persons in Government service employed intermittently.

(d) VOLUNTEER SERVICE.—

(1)(A) The Secretary is authorized to accept voluntary and uncompensated services without regard to the provisions of section 1342 of title 31, United States Code, if such services will not be used to displace Federal employees employed on a full-time, part-time, or seasonal basis.

(B) The Secretary is authorized to accept volunteer service in accordance with the provisions of section 3111 of title 5, United States Code.

(2) The Secretary is authorized to provide for incidental expenses, including but not limited to transportation, lodging, and subsistence for individuals who provide voluntary services under subparagraph (A) or (B) of paragraph (1).

(3) An individual who provides voluntary services under paragraph (1)(A) shall not be considered a Federal employee for any purpose other than for purposes of chapter 81 of title 5, United States Code, relating to compensation for work injuries, and chapter 171 of title 28, United States Code, relating to tort claims.

SEC. 142. DELEGATION AND ASSIGNMENT.

Except where otherwise expressly prohibited by law or otherwise provided by this subtitle, the Secretary may delegate any of the functions transferred to the Secretary by this subtitle and any function transferred or granted to the Secre-

tary after the effective date of this subtitle to such officers and employees of the Department as the Secretary may designate, and may authorize successive redelegations of such functions as may be necessary or appropriate. No delegation of functions by the Secretary under this section or under any other provision of this subtitle shall relieve the Secretary of responsibility for the administration of such functions.

SEC. 143. SUCCESSION.

(a) IN GENERAL.—Subject to the authority of the President, and except as provided in section 112(b), the Secretary shall prescribe the order by which officers of the Department who are appointed by the President, by and with the advice and consent of the Senate, shall act for, and perform the functions of, the Secretary or any other officer of the Department appointed by the President, by and with the advice and consent of the Senate, during the absence or disability of the Secretary or such other officer, or in the event of a vacancy in the office of the Secretary or such other officer.

(b) PERIOD OF SERVICE.—Notwithstanding any other provision of law, and unless the President directs otherwise, an individual acting for the Secretary or another officer of the Department pursuant to subsection (a) shall continue to serve in that capacity until the absence or disability of the Secretary or such other officer no longer exists or a successor

to the Secretary or such other officer has been appointed by the President and confirmed by the Senate.

SEC. 144. REORGANIZATION.

(a) IN GENERAL.—Except as provided in subsection (b), the Secretary is authorized to allocate or reallocate functions among the officers of the Department, and to establish, consolidate, alter, or discontinue such organizational entities in the Department as may be necessary or appropriate.

(b) EXCEPTION.—The authority of the Secretary under subsection (a) does not apply to any office established in the Department by this subtitle or any other function which this subtitle specifies shall be performed by a particular officer or employee of the Department.

SEC. 145. RULES.

The Secretary is authorized to prescribe, in accordance with the provisions of chapters 5 and 6 of title 5, United States Code, such rules and regulations as the Secretary determines necessary or appropriate to administer and manage the functions of the Secretary or the Department.

SEC. 146. WORKING CAPITAL FUND.

(a) ESTABLISHMENT.—The Secretary is authorized to establish for the Department a working capital fund, to be available without fiscal year limitation, for expenses necessary for the maintenance and operation of such common ad-

ministrative services as the Secretary shall find to be desirable in the interest of economy and efficiency, including—

(1) a central supply service for stationery and other supplies and equipment for which adequate stocks may be maintained to meet in whole or in part the requirements of the Department and its components;

(2) central messenger, mail, and telephone service and other communications services;

(3) office space, central services for document reproduction and for graphics and visual aids;

(4) a central library service; and

(5) such other services as may be approved by the Director of the Office of Management and Budget.

(b) CAPITAL.—The capital of the fund shall consist of any appropriations made for the purpose of providing working capital and the fair and reasonable value of such stocks of supplies, equipment, and other assets and inventories on order as the Secretary may transfer to the fund, less the related liabilities and unpaid obligations. The fund shall be reimbursed in advance from available funds of agencies and offices in the Department, or from other sources, for supplies and services at rates which will approximate the expense of operation, including the accrual of annual leave and the depreciation of equipment. The fund shall also be credited with receipts from sale or exchange of property and receipts in

payment for loss or damage to property owned by the fund. There shall be covered into the United States Treasury as miscellaneous receipts any surplus of the fund (all assets, liabilities, and prior losses considered) above the amounts transferred or appropriated to establish and maintain the fund. There shall be transferred to the fund the stocks of supplies, equipment, other assets, liabilities, and unpaid obligations relating to those services which the Secretary determines will be performed.

SEC. 147. CONTRACTS, GRANTS, AND COOPERATIVE AGREEMENTS.

(a) AUTHORITY.—Subject to the provisions of the Federal Property and Administrative Services Act of 1949, the Secretary may make, enter into, and perform such contracts, leases, cooperative agreements, grants, or other similar transactions with public agencies, private organizations, and persons, and make payments (in lump sum or installments, and by way of advance or reimbursement, and, in the case of any grant, with necessary adjustments on account of overpayments and underpayments) as the Secretary considers necessary or appropriate to carry out the functions of the Secretary or the Department.

(b) LIMITATION.—Notwithstanding any other provision of this subtitle, the authority to enter into contracts or to make payments under this subtitle shall be effective only to

such extent or in such amounts as are provided in advance in appropriation Acts. This subsection does not apply with respect to the authority granted under section 151.

SEC. 148. PUBLICATIONS.

Subject to such procedures of the Director of the Office of Management and Budget may prescribe, the Secretary may disseminate in the form of reports or publications such information as the Secretary considers appropriate.

SEC. 149. USE OF FACILITIES.

(a) USE BY SECRETARY.—With their consent, the Secretary, with or without reimbursement, may use the research, services, equipment, and facilities of—

(1) an individual;

(2) any public or private nonprofit agency or organization, including any agency or instrumentality of the United States or of any State, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States;

(3) any political subdivision of any State, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States; or

(4) any foreign government,

in carrying out any function of the Secretary or the Department.

(b) Use by Others.—The Secretary, under terms, at rates, and for periods that the Secretary considers to be in the public interest, may permit the use by public and private agencies, corporations, associations or other organizations, or by individuals, of any real property, or any facility, structure or other improvement thereon, under the custody of the Secretary. The Secretary may require permittees under this section to maintain or recondition, at their own expense, the real property, facilities, structures, and improvements used by such permittees.

SEC. 150. FIELD OFFICES.

The Secretary may establish, alter, consolidate, maintain, or discontinue State, regional, district, local, or other field offices as the Secretary finds necessary or appropriate to perform any function of the Secretary or the Department.

SEC. 151. GIFTS AND BEQUESTS.

(a) General Authority.—The Secretary is authorized to accept, hold, administer, and utilize gifts and bequests of property, both real and personal, for the purpose of aiding or facilitating the work of the Department. Gifts and bequests of money and the proceeds from sales of other property received as gifts or bequests shall be deposited in the United States Treasury in a separate fund and shall be disbursed on order of the Secretary. Property accepted pursuant to this

paragraph, and the proceeds thereof, shall be used as nearly as possible in accordance with the terms of the gift or bequest.

(b) TAX STATUS.—For the purpose of Federal income, estate, and gift taxes, and State taxes, property accepted under subsection (a) shall be considered a gift or bequest to or for use of the United States.

(c) INVESTMENTS.—Upon the request of the Secretary, the Secretary of the Treasury may invest and reinvest in securities of the United States or in securities guaranteed as to principal and interest by the United States any moneys contained in the fund provided for in subsection (a). Income accruing from such securities, and from any other property held by the Secretary pursuant to subsection (a), shall be deposited to the credit of the fund, and shall be disbursed upon order of the Secretary.

SEC. 152. SEAL OF DEPARTMENT.

The Secretary shall cause a seal of office to be made for the Department of such design as the Secretary shall approve. Judicial notice shall be taken of such seal.

SEC. 153. ANNUAL REPORT.

The Secretary shall, as soon as practicable after the end of each fiscal year, prepare and transmit a written report to the President for transmission to the Congress on the activities of the Department during such fiscal year.

SEC. 154. AMENDMENTS.

(a) ORDER OF SUCCESSION.—Section 19(d)(1) of title 3, United States Code, is amended by striking out "Secretary of Commerce," and inserting in lieu thereof "Secretary of Industry and Technology,".

(b) DEFINITION OF EXECUTIVE DEPARTMENT.—Section 101 of title 5, United States Code, is amended by striking out the item relating to the Department of Commerce and inserting in lieu thereof the following:

"The Department of Industry and Technology.".

(c) SALARY OF SECRETARY.—Section 5312 of such title is amended—

(1) by striking out the item relating to the Secretary of Commerce; and

(2) by adding at the end thereof the following:

"Secretary of Industry and Technology.".

(d) OFFICIALS AT LEVEL II.—Section 5313 of title 5, United States Code, is amended by adding at the end thereof the following:

"Deputy Secretary, Department of Industry and Technology.

"Under Secretary of Industry and Technology for Industry.

"Under Secretary of Industry and Technology for Technology.".

(e) Officials at Level III.—Section 5314 of such title is amended—

(1) by striking out the item relating to the Under Secretary of Commerce, the Under Secretary of Commerce for Economic Affairs, and the Under Secretary of Commerce for Travel and Tourism;

(2) by striking out the item relating to the Under Secretary of Commerce for Oceans and Atmosphere;

(3) by adding at the end thereof the following:

"Under Secretary of Industry and Technology for Oceans and Atmosphere, who shall serve as Administrator of the National Oceanic and Atmospheric Administration.

"Under Secretary of Industry and Technology for Travel and Tourism.

"Director of the Office of Economic Analysis, Department of Industry and Technology.

"Director of the Office of Trade Development, Department of Industry and Technology.

"Director General of the United States and Foreign Commercial Service, Department of Industry and Technology.

"Administrator of the Advanced Civilian Technology Agency, Department of Industry and Technology.

"Director of the National Bureau of Standards, Department of Industry and Technology.".

(f) OFFICIALS AT LEVEL IV.—Section 5315 of such title is amended—

(1) by striking out the item relating to the Assistant Secretaries of Commerce;

(2) by striking out the item relating to the General Counsel of the Department of Commerce;

(3) by striking out the item relating to the Assistant Secretary of Commerce for Oceans and Atmosphere;

(4) by striking out the item relating to the Director of the National Bureau of Standards of the Department of Commerce;

(5) by adding at the end thereof the following:

"Assistant Secretary of Industry and Technology for Economic Development.

"Assistant Secretary of Industry and Technology for Technology Information.

"Assistant Secretary of Industry and Technology for Communications and Information.

"Assistant Secretary of Industry and Technology for Oceans and Atmosphere, who shall serve as Deputy Administrator of the National Oceanic and Atmospheric Administration.

"Additional Assistant Secretaries of Industry and Technology (2).

"Commissioner of Patents and Trademarks, Department of Industry and Technology.

"General Counsel, Department of Industry and Technology.

"Inspector General, Department of Industry and Technology.".

(g) OFFICIALS AT LEVEL V.—Section 5316 of such title is amended—

(1) by striking out the item relating to the Commissioner of Patents, Department of Commerce;

(2) by striking out the item relating to the Director of the Bureau of the Census, Department of Commerce;

(3) by striking out the item relating to the National Export Expansion Coordinator, Department of Commerce;

(4) by striking out the item relating to the Director, United States Travel Service, Department of Commerce;

(5) by striking out the item relating to the Inspector General, Department of Commerce;

(6) by adding at the end thereof the following:

"Director of the Bureau of the Census, Department of Industry and Technology.

"Director of Small Business Trade Remedy Assistance, Department of Industry and Technology.

"Director of the Office of International Technology Monitoring, Department of Industry and Technology.".

(h) INSPECTOR GENERAL.—The Inspector General Act of 1978 is amended—

(1) by striking out "the Department of Commerce," in section 2(1);

(2) by inserting "the Department of Industry and Technology," after "Urban Development," in such section;

(3) by striking out subparagraph (B) of section 9(a)(1);

(4) by redesignating subparagraphs (C) through (E) of such section as subparagraphs (B) through (D), respectively;

(5) by inserting before subparagraph (F) of such section the following:

"(E) of the Department of Industry and Technology, all functions of the Inspector General of the Department of Commerce and the Office of the Inspector General of the Department of Commerce relating to the

functions transferred to the Secretary of Industry and Technology by section 131 of the Economic Competitiveness, International Trade, and Technology Development Act of 1987;";

(6) by striking out "Commerce," each place it appears in section 11; and

(7) by inserting "Industry and Technology," after "Urban Development," each place it appears in such section.

SEC. 155. REPEALS.

(a) TERMINATION OF DEPARTMENT OF COMMERCE.—

(1) The first section of the Act entitled "An Act to establish the Department of Commerce and Labor", approved February 14, 1903 (15 U.S.C. 1501), is repealed.

(2) The first section of the Act entitled "An Act to create a Department of Labor", approved March 4, 1913 (15 U.S.C. 1501), is amended by striking out beginning with "and the Department of Commerce and Labor" through "accordingly".

(b) TERMINATION OF UNDER SECRETARY OF COMMERCE.—Subsection (a) of the first section of the Act entitled "An Act to authorize an Under Secretary of Commerce

for Economic Affairs", approved June 16, 1982 (96 Stat. 115; 15 U.S.C. 1503a), is repealed.

(c) Termination of Assistant Secretary of Commerce.—The Act entitled "An Act to provide for the appointment of one additional Assistant Secretary of Commerce, and for other purposes", approved July 15, 1947 (15 U.S.C. 1505), is repealed.

(d) Conforming Amendment.—The first sentence of section 304 of the Department of Commerce Appropriation Act, 1955 (15 U.S.C. 1506), is repealed.

(e) Termination of Assistant Secretary of Commerce.—The Act entitled "An Act to authorize an additional Assistant Secretary of Commerce", approved February 16, 1962 (15 U.S.C. 1507), is repealed.

(f) Conforming Amendment.—Subsection (a) of section 9 of the Maritime Appropriation Authorization Act for Fiscal Year 1978 (15 U.S.C. 1507b), is repealed.

(g) Termination of Solicitor.—

(1) The first section of the Act of March 18, 1904 (33 Stat. 135, chapter 716; 15 U.S.C. 1508), is amended by striking out the paragraph relating to the Office of the Solicitor of the Department of Commerce and Labor.

(2) Section 2 of the Act of July 17, 1952 (66 Stat. 758, chapter 932; 15 U.S.C. 1508), is repealed.

(h) OTHER TECHNICAL AMENDMENTS.—

(1) Sections 4 and 12 of the Act entitled "An Act to Establish the Department of Commerce and Labor", approved February 14, 1903 (15 U.S.C. 1511), are repealed.

(2) The first section of the Act of August 23, 1912 (37 Stat. 407, chapter 350; 15 U.S.C. 1511), is amended by striking out the paragraph relating to the Bureau of Foreign and Domestic Commerce.

(3) The first section of the Act of January 5, 1923 (42 Stat. 1109, chapter 23; 15 U.S.C. 1511), is repealed.

(4) The first section of the Act of May 27, 1936 (49 Stat. 1380, chapter 463; 15 U.S.C. 1511), is repealed.

(i) CONFORMING AMENDMENT.—Section 8 of the Act entitled "An Act to establish the Department of Commerce and Labor", approved February 14, 1903 (15 U.S.C. 1519), is repealed.

(j) TERMINATION OF WORKING CAPITAL FUND.—Title III of the Act entitled "An Act making appropriations for the Departments of State, Justice, and Commerce for the fiscal year ending June 30, 1945, and for other purposes", approved June 28, 1944 (15 U.S.C. 1521), is amended by

striking out the paragraph relating to the working capital fund of the Department of Commerce.

(k) CONFORMING AMENDMENT.—Sections 1, 2, and 3 of Public Law 88-611 (15 U.S.C. 1522, 1523, and 1524) are repealed.

Subtitle B—Trade Functions

PART I—GENERAL PROVISIONS

SEC. 161. ESTABLISHMENT OF UNITED STATES TRADE ADMINISTRATION.

(a) IN GENERAL.—There is established as an independent agency in the Executive branch of the Government the United States Trade Administration. The United States Trade Administration shall be headed by the United States Trade Representative, who shall be appointed by the President, by and with the advice and consent of the Senate. As an exercise of the rulemaking power of the Senate, any nomination of the United States Trade Representative submitted to the Senate for confirmation, and referred to a committee, shall be referred to the Committee on Finance. The United States Trade Representative shall hold office at the pleasure of the President, shall be entitled to receive the same allowances as a chief of mission, and shall have the rank of Ambassador Extraordinary and Plenipotentiary.

(b) DEPUTY UNITED STATES TRADE REPRESENTATIVES.—

(1) There shall be in the Administration four Deputy United States Trade Representatives, who each shall be appointed by the President, by and with the advice and consent of the Senate. As an exercise of the rulemaking power of the Senate, any nomination of a Deputy United States Trade Representative submitted to the Senate for confirmation, and referred to a committee, shall be referred to the Committee on Finance. Each Deputy United States Trade Representative shall hold office at the pleasure of the President and shall have the rank of Ambassador.

(2) One of the Deputy United States Trade Representatives appointed under paragraph (1) shall be the Deputy United States Trade Representative for Economic Policy. Notwithstanding any other provision of law, the United States Trade Representative shall carry out through such Deputy United States Trade Representative—

(A) all functions transferred to the United States Trade Representative under section 164(b); and

(B) all functions of the United States Trade Representative relating to trade policy that are specifically concerned with industrial sector, the services sector, and the agricultural sector.

(3) One of the Deputy United States Trade Representatives appointed pursuant to paragraph (1) shall be the Deputy United States Trade Representative for Trade Policy and Negotiation.

(4) One of the Deputy United States Trade Representatives appointed pursuant to paragraph (1) shall be the Deputy United States Trade Representative for Management.

(c) OFFICE OF TRADE ENFORCEMENT PROGRAMS.—

(1) There shall be in the Administration the Office of Trade Enforcement Programs. Such Office shall be headed by the Director of Trade Enforcement Programs, who shall be appointed by the President, by and with the advice and consent of the Senate. Notwithstanding any other provision of law, the United States Trade Representative shall carry out through such Director all functions transferred to the United States Trade Representative under section 164(c).

(2)(A) There shall be in the Office of Trade Enforcement Programs—

(i) a Deputy Director of Trade Enforcement Programs for Import Administration;

(ii) a Deputy Director of Trade Enforcement Programs for Export Administration; and

(iii) a Deputy Director of Trade Enforcement Programs for Export Enforcement.

(B) Each Deputy Director of Trade Enforcement Programs shall perform such functions as the Director of Trade Enforcement Programs and the United States Trade Representative may prescribe.

(d) General Counsel.—There shall be in the Administration a General Counsel, who shall be appointed by the President, by and with the advice and consent of the Senate. The General Counsel shall provide legal assistance to the United States Trade Representative concerning the activities, programs, and policies of the Administration.

(e) Chief Textile Negotiator.—There shall be in the Administration a Chief Textile Negotiator, who shall be appointed by the United States Trade Representative and who shall have the rank and status of Ambassador.

SEC. 162. OFFICE OF TRADE POLICY COORDINATION.

There is established in the Executive Office of the President the Office of Trade Policy Coordination. Such Office shall be headed by the United States Trade Representative appointed under section 161(a). The United States Trade Representative shall carry out through such Office all functions of the United States Trade Representative under section 242 of the Trade Expansion Act of 1962, all functions of the President under such section which are delegated *by the President to the United States Trade Representative, and all functions of the United States Trade Representative with respect to the Economic Policy Council established under section 185 of this Act.*

SEC. 163. FUNCTIONS OF THE ADMINISTRATION.

(a) IN GENERAL.—In addition to the functions transferred to and assigned to the United States Trade Representative by this subtitle, such other functions as the President may assign or delegate to the United States Trade Representative, and such other functions as the United States Trade Representative may, after the effective date of this title, be required to carry out by law, the United States Trade Representative shall—

(1) have primary responsibility for developing, and for coordinating the implementation of, United States international trade policy, including commodity matters, and, to the extent they are related to international trade policy, direct investment matters;

(2) serve as the principal advisor to the President on international trade policy and shall advise the President on the impact of other policies of the United States Government on international trade;

(3) have lead responsibility for the conduct of, and shall be the chief representative of the United

States for, international trade negotiations in which the United States participates;

(4) issue and coordinate policy guidance to departments and agencies on basic issues of policy and interpretation arising in the exercise of international trade functions, to the extent necessary to assure the coordination of international trade policy and consistent with any other law;

(5) act as the principal spokesman of the President on international trade;

(6) report directly to the President and the Congress regarding, and be responsible to the President and the Congress for the administration of, trade agreements programs;

(7) advise the President and Congress with respect to nontariff barriers to international trade, international commodity agreements, and other matters which are related to the trade agreements programs; and

(8) be responsible for making reports to Congress with respect to matters referred to in subparagraphs (3) and (6).

(b) ADMINISTRATION.—Except as provided in section 162, the United States Trade Representative shall carry out

the functions described in subsection (a) through the Administration.

(c) SENSE OF CONGRESS.—It is the sense of Congress that the United States Trade Representative shall—

(1) be the senior representative on any body that the President may establish for the purpose of providing to the President advice on overall economic policies in which international trade matters predominate; and

(2) be included as a participant in all economic summits and other international meetings at which international trade is a major topic.

SEC. 164. TRANSFERS.

(a) TRANSFER OF OFFICE OF UNITED STATES TRADE REPRESENTATIVE.—The Office of the United States Trade Representative in the Executive Office of the President, and all functions of the United States Trade Representative appointed under section 141 of the Trade Act of 1974, are transferred to the United States Trade Representative appointed under section 161(a).

(b) TRANSFERS FROM DEPARTMENT OF COMMERCE.—There are transferred to the United States Trade Representative appointed under section 161(a)—

(1) all functions of the Secretary of Commerce or the Department of Commerce with respect to or being

administered through the Assistant Secretary of Commerce for International Economic Policy; and

(2) all functions of the Secretary of Commerce or the Department of Commerce which are being administered through the Under Secretary of Commerce for International Trade and which relate directly to the management by such Under Secretary of the Office of the Assistant Secretary of Commerce for International Economic Policy.

(c) ADDITIONAL TRANSFERS FROM DEPARTMENT OF COMMERCE.—There are transferred to the United States Trade Representative appointed under section 161(a)—

(1) all functions of the Secretary of Commerce or the Department of Commerce with respect to or being administered through the Assistant Secretary of Commerce for Trade Administration; and

(2) all functions of the Secretary of Commerce or the Department of Commerce which are being administered through the Under Secretary of Commerce for International Trade and which relate directly to the management by such Under Secretary of the Office of the Assistant Secretary of Commerce for Trade Administration.

PART II—ADMINISTRATIVE PROVISIONS

SEC. 171. PERSONNEL PROVISIONS.

(a) APPOINTMENTS.—The United States Trade Representative may appoint and fix the compensation of such officers and employees, including investigators, attorneys, and administrative law judges, as may be necessary to carry out the functions of the United States Trade Representative and the Administration. Except as otherwise provided by law, such officers and employees shall be appointed in accordance with the civil service laws and their compensation fixed in accordance with title 5, United States Code.

(b) SENIOR EXECUTIVE SERVICE.—

(1) At the request of the United States Trade Representative, the Director of the Office of Personnel Management shall, under section 5108 of title 5, United States Code, provide for the establishment in each of the grade levels GS-16, GS-17, and GS-18, and in the Senior Executive Service, of a number of positions in the Administration equal to the number of positions in that grade level which were used primarily for the performance of functions transferred by this subtitle and which were assigned and filled on the day before the effective date of this title.

(2) Appointments to positions provided for under this subsection may be made without regard to the provisions of section 3324 of title 5, United States Code,

if the individual appointed in such position is an individual who is transferred in connection with the transfer of functions and offices under this subtitle and, on the day before the effective date of this subtitle, holds a position and has duties comparable to those of the position to which appointed under this subsection.

(3) The authority under this subsection with respect to any position established at the grade level GS–16, GS–17, or GS–18 shall terminate when the person first appointed to fill such position ceases to hold such position.

(4) For purposes of section 414(a)(3)(A) of the Civil Service Reform Act of 1978, an individual appointed under this subsection shall be deemed to occupy the same position as the individual occupied on the day before the effective date of this title.

(c) EXPERTS AND CONSULTANTS.—The United States Trade Representative may obtain the services of experts and consultants in accordance with section 3109 of title 5, United States Code, and compensate such experts and consultants for each day (including traveltime) at rates not in excess of the rate of pay for grade GS–18 of the General Schedule under section 5332 of such title. The United States Trade Representative may pay experts and consultants who are serving away from their homes or regular place of business

travel expenses and per diem in lieu of subsistence at rates authorized by sections 5702 and 5703 of such title for persons in Government service employed intermittently.

(d) VOLUNTEER SERVICE.—

(1)(A) The United States Trade Representative is authorized to accept voluntary and uncompensated services without regard to the provisions of section 1342 of title 31, United States Code, if such services will not be used to displace Federal employees employed on a full-time, part-time, or seasonal basis.

(B) The United States Trade Representative is authorized to accept volunteer service in accordance with the provisions of section 3111 of title 5, United States Code.

(2) The United States Trade Representative is authorized to provide for incidental expenses, including but not limited to transportation, lodging, and subsistence for individuals who provide voluntary services under subparagraph (A) or (B) of paragraph (1).

(3) An individual who provides voluntary services under paragraph (1)(A) shall not be considered a Federal employee for any purpose other than for purposes of chapter 81 of title 5, United States Code, relating to compensation for work injuries, and chapter 171 of title 28, United States Code, relating to tort claims.

SEC. 172. DELEGATION AND ASSIGNMENT.

Except where otherwise expressly prohibited by law or otherwise provided by this subtitle, the United States Trade Representative may delegate any of the functions transferred to the United States Trade Representative by this subtitle and any function transferred or granted to the United States Trade Representative after the effective date of this subtitle to such officers and employees of the Administration as the United States Trade Representative may designate, and may authorize successive redelegations of such functions as may be necessary or appropriate. No delegation of functions by the United States Trade Representative under this section or under any other provision of this subtitle shall relieve the United States Trade Representative of responsibility for the administration of such functions.

SEC. 173. SUCCESSION.

(a) IN GENERAL.—Subject to the authority of the President, the United States Trade Representative shall prescribe the order by which officers of the Administration who are appointed by the President, by and with the advice and consent of the Senate, shall act for, and perform the functions of, the United States Trade Representative or any other officer of the Administration appointed by the President, by and with the advice and consent of the Senate, during the absence or disability of the United States Trade Representative or

such other officer, or in the event of a vacancy in the office of the United States Trade Representative or such other officer.

(b) Term of Service.—Notwithstanding any other provision of law, and unless the President directs otherwise, an individual acting for the United States Trade Representative or another officer of the Administration pursuant to subsection (a) shall continue to serve in that capacity until the absence or disability of the United States Trade Representative or such other officer no longer exists or a successor to the United States Trade Representative or such other officer has been appointed by the President and confirmed by the Senate.

SEC. 174. REORGANIZATION.

(a) In General.—Except as provided in subsection (b), the United States Trade Representative is authorized to allocate or reallocate functions among the officers of the Administration, and to establish, consolidate, alter, or discontinue such organizational entities in the Administration as may be necessary or appropriate.

(b) Limitation.—The authority of the United States Trade Representative under subsection (a) does not apply to any function which this subtitle specifies shall be performed by a particular officer or employee of the Administration.

SEC. 175. RULES.

The United States Trade Representative is authorized to prescribe, in accordance with the provisions of chapters 5 and 6 of title 5, United States Code, such rules and regulations as the United States Trade Representative determines necessary or appropriate to administer and manage the functions of the United States Trade Representative or the Administration.

SEC. 176. WORKING CAPITAL FUND.

(a) ESTABLISHMENT.—The United States Trade Representative is authorized to establish for the Administration a working capital fund, to be available without fiscal year limitation, for expenses necessary for the maintenance and operation of such common administrative services as the United States Trade Representative shall find to be desirable in the interest of economy and efficiency, including—

(1) a central supply service for stationery and other supplies and equipment for which adequate stocks may be maintained to meet in whole or in part the requirements of the Administration and its components;

(2) central messenger, mail, and telephone service and other communications services;

(3) office space, central services for document reproduction and for graphics and visual aids;

(4) a central library service; and

(5) such other services as may be approved by the Director of the Office of Management and Budget.

*(b) C*APITAL*.—The capital of the fund shall consist of any appropriations made for the purpose of providing working capital and the fair and reasonable value of such stocks of supplies, equipment, and other assets and inventories on order as the United States Trade Representative may transfer to the fund, less the related liabilities and unpaid obligations. The fund shall be reimbursed in advance from available funds of agencies and offices in the Administration, or from other sources, for supplies and services at rates which will approximate the expense of operation, including the accrual of annual leave and the depreciation of equipment. The fund shall also be credited with receipts from sale or exchange of property and receipts in payment for loss or damage to property owned by the fund. There shall be covered into the United States Treasury as miscellaneous receipts any surplus of the fund (all assets, liabilities, and prior losses considered) above the amounts transferred or appropriated to establish and maintain the fund. There shall be transferred to the fund the stocks of supplies, equipment, other assets, liabilities, and unpaid obligations relating to those services which the United States Trade Representative determines will be performed.*

SEC. 177. CONTRACTS, GRANTS, AND COOPERATIVE AGREEMENTS.

(a) IN GENERAL.—Subject to the provisions of the Federal Property and Administrative Services Act of 1949, the United States Trade Representative may make, enter into, and perform such contracts, leases, cooperative agreements, grants, or other similar transactions with public agencies, private organizations, and persons, and make payments (in lump sum or installments, and by way of advance or reimbursement, and, in the case of any grant, with necessary adjustments on account of overpayments and underpayments) as the United States Trade Representative considers necessary or appropriate to carry out the functions of the United States Trade Representative or the Administration.

(b) LIMITATION.—Notwithstanding any other provision of this subtitle, the authority to enter into contracts or to make payments under this subtitle shall be effective only to such extent or in such amounts as are provided in advance in appropriation Acts. This subsection does not apply with respect to the authority granted under section 180.

SEC. 178. PUBLICATIONS.

Subject to such procedures of the Director of the Office of Management and Budget may prescribe, the United States Trade Representative may disseminate in the form of reports or publications such information as the United States Trade Representative considers appropriate. The United States

Trade Representative may provide, where authorized by law, copies of documents to persons at cost, except that any funds so received shall be credited to, and be available for use from, the account from which expenditures relating thereto were made.

SEC. 179. USE OF FACILITIES.

(a) FACILITIES OF OTHER AGENCIES.—With their consent, the United States Trade Representative, with or without reimbursement, may use the research, services, equipment, and facilities of—

(1) an individual;

(2) any public or private nonprofit agency or organization, including any agency or instrumentality of the United States or of any State, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States;

(3) any political subdivision of any State, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States; or

(4) any foreign government,

in carrying out any function of the United States Trade Representative or the Administration.

(b) PERMITTEES.—The United States Trade Representative, under terms, at rates, and for periods that the

United States Trade Representative considers to be in the public interest, may permit the use by public and private agencies, corporations, associations or other organizations, or by individuals, of any real property, or any facility, structure or other improvement thereon, under the custody of the United States Trade Representative. The United States Trade Representative may require permittees under this section to maintain or recondition, at their own expense, the real property, facilities, structures, and improvements used by such permittees.

SEC. 180. GIFTS AND BEQUESTS.

(a) IN GENERAL.—The United States Trade Representative is authorized to accept, hold, administer, and utilize gifts and bequests of property, both real and personal, for the purpose of aiding or facilitating the work of the Administration. Gifts and bequests of money and the proceeds from sales of other property received as gifts or bequests shall be deposited in the United States Treasury in a separate fund and shall be disbursed on order of the United States Trade Representative. Property accepted pursuant to this paragraph, and the proceeds thereof, shall be used as nearly as possible in accordance with the terms of the gift or bequest.

(b) TAX STATUS.—For the purpose of Federal income, estate, and gift taxes, and State taxes, property accepted

under subsection (a) shall be considered a gift or bequest to or for use of the United States.

(c) INVESTMENT.—Upon the request of the United States Trade Representative, the Secretary of the Treasury may invest and reinvest in securities of the United States or in securities guaranteed as to principal and interest by the United States any moneys contained in the fund provided for in subsection (a). Income accruing from such securities, and from any other property held by the United States Trade Representative pursuant to subsection (a), shall be deposited to the credit of the fund, and shall be disbursed upon order of the United States Trade Representative.

SEC. 181. SEAL OF ADMINISTRATION.

The United States Trade Representative shall cause a seal of office to be made for the Administration of such design as the United States Trade Representative shall approve. Judicial notice shall be taken of such seal.

SEC. 182. ANNUAL REPORT.

The United States Trade Representative shall, as soon as practicable after the end of each fiscal year, prepare and transmit a written report to the President for transmission to the Congress on the activities of the Administration during such fiscal year.

SEC. 183. TECHNICAL AMENDMENTS.

(a) DEPUTY UNITED STATES TRADE REPRESENTATIVE.—Section 5314 of title 5, United States Code (as amended by section 154(e) of this Act) is further amended by striking out the item relating to the Deputy United States Trade Representatives and inserting in lieu thereof the following:

"Deputy United States Trade Representative for Economic Policy.

"Deputy United States Trade Representative for Trade Policy and Negotiation.

"Deputy United States Trade Representative for Management.

"Deputy United States Trade Representative.

"Director for Trade Enforcement Programs, United States Trade Administration.".

(b) GENERAL COUNSEL.—Section 5315 of such title as amended by section 154(f) of this Act is further amended by adding at the end thereof the following new item:

"General Counsel, United States Trade Administration.".

(c) TECHNICAL AMENDMENT.—Section 141 of the Trade Act of 1974 is amended by striking out subsections (a), (b), (c), and (d).

Subtitle C—Economic Policy Council

SEC. 185. ESTABLISHMENT.

(a) ESTABLISHMENT.—The President shall establish in the Executive Office of the President a council to be known as the Economic Policy Council (hereafter referred to in this section as the "Council"). The Council shall be the interagency organization required to be established by the President under section 242 of the Trade Expansion Act of 1962.

(b) MEMBERSHIP.—The Council shall be composed of—

(1) the President;

(2) the Vice President;

(3) the Secretary of State;

(4) the Secretary of the Treasury;

(5) the Secretary of Defense;

(6) the Secretary of Agriculture;

(7) the Secretary of Industry and Technology;

(8) the Secretary of Labor;

(9) the United States Trade Representative; and

(10) such heads of other Federal agencies which the President may designate.

(c) PRESIDING OFFICER.—The President shall preside over meetings of the Council. In the President's absence, the President may designate a member to preside for the Presi-

dent, except that, in the absence of the President, the President shall designate the United States Trade Representative to preside over meetings of the Council regarding international trade or meetings of the Council to carry out the duties described in section 242(b) of the Trade Expansion Act of 1962.

(d) D*UTIES.*—

(1) The Council shall advise the President with respect to national and international economic policies and the integration of such policies in order to enable the President and Federal agencies to cooperate more effectively in matters involving economic policy, including advice with respect to—

(A) trade policy;

(B) monetary policy;

(C) fiscal policy;

(D) international financial policy;

(E) foreign aid policy; and

(F) investment policy.

(2) In addition to performing such other functions as the President may direct concerning economic policy in general, for the purposes of more effectively coordinating the policies and functions of Federal agencies relating to international trade and making recommen-

dations to the President, the Council shall, subject to the direction of the President—

(A) assess and appraise the international trade policies (including commodity and direct investment matters) and international trade objectives of the United States;

(B) consider policies on matters of common interest to the Federal agencies concerned with international trade;

(C) consider the relationship between the standard of living in the United States and the international trade policies of the United States; and

(D) evaluate the effects of the international trade policies and objectives of the United States on the national security.

(3) The duties of the Council under paragraphs (1) and (2) are in addition to the duties prescribed by section 242(b) of the Trade Expansion Act of 1962.

(e) PERSONNEL.—The President shall provide such personnel for the Council, including an Executive Secretary, as are necessary to enable the Council to carry out the functions of the Council. The Executive Secretary shall direct activities by the staff of the Council, and shall coordinate, on

an ongoing basis, such activities with the activities of the staffs of the members of the Council.

(f) CONSULTATION.—In carrying out the functions of the Council, each member of the Council shall consult with—

(1) committees established to advise the Federal agency of which such member is the head;

(2) advisory committees established under section 135 of the Trade Act of 1974; and

(3) other representatives of the private sector.

(g) RECOMMENDATIONS AND REPORTS.—The Council shall, from time to time, make such recommendations and such reports to the President as the Council considers to be appropriate or as the President may request.

(h) TERMINATION OF TRADE POLICY COMMITTEE.—The Trade Policy Committee shall terminate on the effective date of this title.

Subtitle D—Transitional, Savings, and Conforming Provisions

SEC. 191. TRANSFER AND ALLOCATIONS OF APPROPRIATIONS AND PERSONNEL.

Except as otherwise provided in this title, the personnel employed in connection with, and the assets, liabilities, contracts, property, records, and unexpended balances of appropriations, authorizations, allocations, and other funds employed, used, held, arising from, available to, or to be made *available in connection with the functions transferred to the Secretary or the United States Trade Representative by this title, subject to section 1531 of title 31, United States Code, shall be transferred to the Secretary or the United States Trade Representative, as the case may be. Unexpended funds transferred pursuant to this section shall be used only for the purposes for which the funds were originally authorized and appropriated.*

SEC. 192. INCIDENTAL TRANSFERS.

(a) AUTHORITY OF OMB DIRECTOR.—The Director of the Office of Management and Budget, at such time or times as the Director shall provide, is authorized to make such determinations as may be necessary with regard to the functions transferred by this title, and to make such additional incidental dispositions of personnel, assets, liabilities, grants, contracts, property, records, and unexpended balances of appropriations, authorizations, allocations, and other funds held, used, arising from, available to, or to be made available in connection with such functions, as may be necessary to carry out the provisions of this title. The Director shall provide for the termination of the affairs of all entities terminated by this title and for such further measures and dispositions as may be necessary to effectuate the purposes of this title.

(b) AUTHORITY OF OPM DIRECTOR.—After consultation with the Director of the Office of Personnel Management, the Director of the Office of Management and Budget is authorized, at such times as the Director of the Office of Management and Budget may provide, to make such determinations as may be necessary with regard to the transfer of positions within the Senior Executive Service in connection with the functions transferred by this title.

SEC. 193. EFFECT ON PERSONNEL.

(a) PRESERVATION OF PERSONNEL STATUS.—Except as otherwise provided by this title, the transfer pursuant to this title of full-time personnel (except special Government employees) and part-time personnel holding permanent positions shall not cause any such employee to be separated or reduced in grade or compensation for one year after the date of transfer of such employee under this title.

(b) SENIOR OFFICIAL.—Any person who, on the day preceding the effective date of this title, held a position compensated in accordance with the Executive Schedule prescribed in chapter 53 of title 5, United States Code, and who, without a break in service, is appointed in a Federal agency to which functions are transferred by this title to a position having duties comparable to the duties performed immediately preceding such appointment shall continue to be compensated in such new position at not less than the rate provided

for such previous position, for the duration of the service of such person in such new position.

(c) TERMINATIONS.—Positions whose incumbents are appointed by the President, by and with the advice and consent of the Senate, the functions of which are transferred by this title, shall terminate on the effective date of this title.

SEC. 194. SAVINGS PROVISIONS.

(a) IN GENERAL.—All orders, determinations, rules, regulations, permits, contracts, certificates, licenses, and privileges that—

(1) have been issued, made, granted, or allowed to become effective by the President, any Federal agency or official thereof, or by a court of competent jurisdiction, in the performance of functions which are transferred by this title; and

(2) are in effect when this title takes effect,

shall continue in effect according to their terms until modified, terminated, superseded, set aside, or revoked in accordance with law by the President, the Secretary, the United States Trade Representative, a court of competent jurisdiction, or by operation of law.

(b) EFFECT ON ADMINISTRATIVE PROCEEDINGS.—

(1) The provisions of this title shall not affect any proceedings, including notices of proposed rule making, or any application for any license, permit, certificate,

or financial assistance pending on the effective date of this title before the Department of Commerce, or any office thereof with respect to functions transferred by this title; but such proceedings or applications, to the extent that they relate to functions transferred, shall be continued. Orders shall be issued in such proceedings, appeals shall be taken therefrom, and payments shall be made under such orders, as if this title had not been enacted; and orders issued in any such proceedings shall continue in effect until modified, terminated, superseded, or revoked by the Secretary, the United States Trade Representative, a court of competent jurisdiction, or by operation of law. Nothing in this subsection prohibits the discontinuance or modification of any such proceeding under the same terms and conditions and to the same extent that such proceeding could have been discontinued or modified if this title had not been enacted.

(2) The Secretary of Commerce, the United States Trade Representative, and the Secretary are authorized to issue regulations providing for the orderly transfer of proceedings continued under paragraph (1).

(c) EFFECT ON LEGAL ACTIONS.—Except as provided in subsection (e)—

(1) the provisions of this title do not affect actions commenced prior to the effective date of this title, and

(2) in all such actions, proceedings shall be had, appeals taken, and judgments rendered in the same manner and effect as if this title had not been enacted.

(d) NO ABATEMENT OF ACTIONS OR PROCEEDINGS.—No action or other proceeding commenced by or against any officer in his official capacity as an officer of the Department of Commerce with respect to functions transferred by this title shall abate by reason of the enactment of this title. No cause of action by or against the Department of Commerce with respect to functions transferred by this title, or by or against any officer thereof in his official capacity, shall abate by reason of the enactment of this title. Causes of action and actions with respect to a function transferred by this title, or other proceedings may be asserted by or against the United States, the Secretary or the United States Trade Representative, as may be appropriate, and, in an action pending when this title takes effect, the court may at any time, on its own motion or that of any party, enter an order which will give effect to the provisions of this subsection.

(e) SUBSTITUTION.—If, before the date on which this title takes effect, the Department of Commerce or any officer thereof in his official capacity, is a party to an action, and under this title any function of such Department or officer is

transferred to the Secretary or the United States Trade Representative, then such action shall be continued with the Secretary or the United States Trade Representative, as the case may be, substituted or added as a party.

(f) EXERCISE OF TRANSFERRED FUNCTIONS.—Orders and actions of the head of a Federal agency in the exercise of functions transferred to the head of such agency by this title shall be subject to judicial review to the same extent and in the same manner as if such orders and actions had been by the Department of Commerce or any office or officer thereof, in the exercise of such functions immediately preceding their transfer. Any statutory requirements relating to notice, hearings, action upon the record, or administrative review that apply to any function transferred by this title shall apply to the exercise of such function by the Secretary or the United States Trade Representative.

SEC. 195. SEPARABILITY.

If a provision of this title or its application to any person or circumstance is held invalid, neither the remainder of this title nor the application of the provision to other persons or circumstances shall be affected.

SEC. 196. REFERENCE.

With respect to any function transferred to the Secretary or the United States Trade Representative by this title and exercised after the effective date of this title, reference in *any other Federal law to any department, agency, office, or officer the functions of which are so transferred shall be considered to refer to the Secretary or the United States Trade Representative, as the case may be.*

SEC. 197. TRANSITION.

With the consent of the Secretary of Commerce, the Secretary or the United States Trade Representative is authorized to utilize—

(1) the services of such officers, employees, and other personnel of the Department of Commerce, with respect to functions transferred to the Secretary or the United States Trade Representative by this title; and

(2) funds appropriated to such functions or offices for such period of time as may reasonably be needed to facilitate the orderly implementation of this title.

SEC. 198. TERMINATIONS.

(a) DEPARTMENT OF COMMERCE.—The Department of Commerce is terminated.

(b) USTR.—The Office of the United States Trade Representative in the Executive Office of the President is terminated.

SEC. 199. EFFECTIVE DATE; INTERIM APPOINTMENTS; AUTHORIZATION

(a) EFFECTIVE DATE.—

(1) This title shall take effect on January 20, 1989, except that—

(A) section 197 shall take effect on the date of enactment; and

(B) at any time after the date of enactment of this title—

(i) the officers provided for in this title may be nominated and appointed, as provided in this title;

(ii) the Secretary of Commerce, the United States Trade Representative, and the Secretary may promulgate regulations under section 194(b)(2).

(2) Funds available to the Department of Commerce (or any official or component thereof), with respect to the functions transferred by this title, may be used, with approval of the Director of the Office of Management and Budget, to pay the compensation and expenses of an officer appointed under subsection (a)(2)(A) who will carry out such functions until funds for that purpose are otherwise available.

(b) INTERIM APPOINTMENTS.—

(1) If one or more officers required by this title to be appointed by and with the advice and consent of the Senate have not entered upon office on the effective

date of this title and notwithstanding any other provision of law, the President may designate any officer who was appointed by and with the advice and consent of the Senate, and who was such an officer on the day before the effective date of this title, to act in the office until it is filled as provided by this title.

(2) Any officer acting in an office pursuant to paragraph (1) shall receive compensation at the rate prescribed by this title for such office.

(c) AUTHORIZATION OF APPROPRIATIONS.—Except as otherwise provided in this title, there are authorized to be appropriated such sums as may be necessary to carry out the provisions of this title. Amounts appropriated under this section shall be available until expended.

TITLE II—INTERAGENCY COMMITTEES AND COMMISSIONS

Subtitle A—Council on Economic Competitiveness

PART I—ESTABLISHMENT OF COUNCIL

SEC. 201. ESTABLISHMENT.

There is hereby established in the Executive branch of the Federal Government as an independent agency the Council on Economic Competitiveness (hereafter in this subtitle referred to as the "Council").

SEC. 202. DUTIES OF THE COUNCIL.

The duties of the Council are to—

(1) collect, analyze, and provide information concerning current and future United States economic competitiveness useful to decision-making in government and industry;

(2) monitor the changing nature of research, science, and technology in the United States as well as the changing nature of the United States industrial economy and its capacity—

(A) to provide marketable, high quality goods and services in domestic and international markets; and

(B) to respond to international competition;

(3) create a forum where national leaders with experience and background in business, labor, academia, public interest activities, and government will—

(A) identify problems hindering the economic competitiveness of the United States;

(B) develop and promote recommendations to address such problems; and

(C) create a broad consensus in support of such recommendations;

(4) develop and promote a national vision and specific policies which enhance the productivity and

international competitiveness of United States industries;

(5) serve as a clearinghouse that identifies and monitors—

(A) Federal and private sector resources devoted to increased competitiveness; and

(B) State and local government programs devised to enhance competitiveness, including joint ventures between universities and corporations;

(6) comment on private sector requests for governmental assistance or relief, specifically in order to determine whether—

(A) the applicant is likely, by receiving the assistance or relief, to become internationally competitive in the future; and

(B) any adjustment commitments should be entered into by relevant parties, such as management and employees of the applicant, shareholders, creditors, suppliers and dealers, and financial institutions, in order to ensure that the applicant is likely to become internationally competitive in the future;

(7) establish, when appropriate, subcouncils of public and private leaders to develop long-term fore-

casts and visions for sectors of the economy and to comment upon specific economic issues;

(8) review and evaluate specific policy recommendations developed by the subcouncils and transmit such recommendations to the Federal agencies responsible for the implementation of such recommendations;

(9) prepare and publish reports containing the recommendations of the Council;

(10) annually report to the President and the Congress on—

(A) the ability of the United States to be internationally competitive;

(B) the status of major sectors of the United States economy; and

(C) the effect that existing policies of the Federal Government are having on the ability of the sectors of the economy to compete internationally;

(11) evaluate and comment upon existing and future Federal policies, practices, and regulations, including fiscal and monetary policies and the budget of the United States Government, with respect to the impact on competitiveness of such policies, practices, and regulations; and

(12) review and comment upon any competitiveness impact statement required by any statute.

SEC. 203. MEMBERSHIP.

(a) COMPOSITION.—

(1) The Council shall consist of 9 members, of which—

(A) 3 members shall be appointed by the President;

(B) 3 members shall be appointed by the majority leader and the minority leader of the Senate, acting jointly; and

(C) 3 members shall be appointed by the Speaker of the House of Representatives.

(2)(A) Members shall be appointed to the Council from among individuals who are—

(i) national leaders with experience and background in business, including small business and advanced technology industries;

(ii) national leaders with experience and background in the labor community;

(iii) individuals from academic institutions and individuals who have been active in public interest activities; and

(iv) representatives of State and local governments.

(B) All members of the Council shall be individuals who have a broad understanding of the United States economy and the United States position in the world economy.

(3) Not more than 5 members of the Council shall be members of the same political party.

(b) INITIAL APPOINTMENTS.—All of the initial members of the Council shall be appointed within 90 days after the date of enactment of this Act.

(c) TERM OF OFFICE.—The term of office of each member of the Council shall be 6 years, except that—

(1) of the members first appointed under subsection (a)(1)(A), 1 shall serve for a term of 2 years, 1 shall serve for a term of 4 years, and 1 shall serve for a term of 6 years, as designated by the President at the time of appointment;

(2) of the members first appointed under subsection (a)(1)(B), 1 shall serve for a term of 2 years, 1 shall serve for a term of 4 years, and 1 shall serve for a term of 6 years, as designated by the majority leader and the minority leader of the Senate at the time of appointment; and

(3) of the members first appointed under subsection (a)(1)(C), 1 shall serve for a term of 2 years, 1 shall serve for a term of 4 years, and 1 shall serve for

a term of 6 years, as designated by the Speaker of the House of Representatives at the time of appointment.

(d) LIMITATION ON SERVICE.—No member of the Council may serve more than 2 consecutive terms, except, that any appointment to fill a vacancy for the remainder of a term in which remains a period of less than 2 years shall not be considered a term for purposes of this subsection.

(e) VACANCIES.—

(1) A vacancy on the Council shall be filled in the same manner in which the original appointment was made.

(2) Any member appointed to fill a vacancy on the Council occurring before the expiration of the term for which such member's predecessor was appointed shall be appointed only for the remainder of such term.

(3) A member of the Council may serve after the expiration of such member's term until such member's successor has taken office.

(f) REMOVAL.—Members of the Council may be removed only for malfeasance in office.

(g) CONFLICT OF INTEREST.—A member of the Council may not serve as an agent or attorney for, or perform any other professional service for or on behalf of, the government of any foreign country, any agency or instrumentality of the

government of a foreign country, or any foreign political party.

(h) COMPENSATION.—

(1) Each member of the Council who is not employed by the Federal Government or any State or local government—

(A) shall be compensated at a rate equal to the daily equivalent of the rate for level II of the Executive Schedule under section 5315 of title 5, United States Code, for each day such member is engaged in duties as a member of the Council; and

(B) shall be paid actual travel expenses, and per diem in lieu of subsistence expenses when away from such member's usual place of residence, in accordance with section 5703 of such title.

(2) Each member of the Council who is employed by the Federal Government or any State or local government shall serve on the Council without additional compensation, but while engaged in duties as a member of the Council shall be paid actual travel expenses, and per diem in lieu of subsistence expenses when away from such member's usual place of resi-

dence, in accordance with subchapter I of chapter 57 of title 5, United States Code.

(i) Quorum.—Five members of the Council shall constitute a quorum, except that a lesser number may hold hearings if such action is approved by a majority vote of the entire Council.

(j) Chairman.—

(1) The Council shall elect, by a majority vote of the entire Council, a Chairman.

(2) The Chairman of the Council shall serve on a full-time basis.

(k) Meetings.—The Council shall meet at the call of the Chairman or a majority of its members, except that the Council shall meet not less than 6 times during each calendar year.

(l) Alternate Members.—

(1) Each member of the Council shall designate one alternate representative to attend any meeting that such member is unable to attend.

(2) In the course of attending any such meeting, an alternate representative shall be considered a member of the Council for all purposes, including voting.

(m) Majority Vote Required.—

(1) Except as provided in subsection (i), no action (whether involving administrative or personnel matters, establishing policy, or any other type of action) shall be taken by the Council unless approved by a majority of the entire membership of the Council.

(2)(A) If a consensus of the majority of the entire membership of the Council, as required under paragraph (1), cannot be reached on a matter referred to the Council by the President or either House of the Congress, the Council shall transmit a report to the President and both Houses of the Congress explaining why a consensus could not be reached on such matter.

(B) Any report by the Council under subparagraph (A) shall include the relevant information gathered by the Council on such matter and a list of potential policy options for addressing the concern involved.

(n) EXPERTS AND CONSULTANTS.—The Council may procure temporary and intermittent services under section 3109(b) of title 5, United States Code, but at rates for individuals not to exceed the daily equivalent of the maximum annual rate of basic pay for GS–16 of the General Schedule.

(o) DETAILS.—Upon request of the Council, the head of any other Federal agency is authorized to detail, on a reimbursable basis, any of the personnel of such agency to the

Council to assist the Council in carrying out its duties under this subtitle.

SEC. 204. EXECUTIVE DIRECTOR AND STAFF.

(a) EXECUTIVE DIRECTOR.—

(1) The principal administrative officer of the Council shall be an Executive Director, who shall be appointed by the Council.

(2) The Council shall consult with the President and leaders of the Congress before appointing an individual to the position of Executive Director.

(3) The Executive Director shall serve on a full-time basis.

(b) STAFF.—The Executive Director may appoint a staff for the Council in accordance with the Federal civil service and classification laws.

(c) ALLOCATION OF STAFF.—The staff of the Council shall be allocated by the Executive Director in such a manner that there is at least one staff person responsible for the affairs of each Council member.

SEC. 205. POWERS OF THE COUNCIL.

(a) HEARINGS.—The Council may, for the purpose of carrying out the provisions of this subtitle, hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence, as the Council considers ap-

propriate. The Council may administer oaths or affirmations to witnesses appearing before the Council.

(b) AGENTS.*—If so authorized by the Council, any member or agent of the Council may take any action which the Council is authorized to take under this section.*

(c) INFORMATION.*—*

(1)(A) Except as provided in subparagraph (B), the Council may secure directly from any Federal agency information necessary to enable the Council to carry out the provisions of this subtitle. Upon request of the Chairman of the Council, the head of such agency shall promptly furnish such information to the Council.

(B) Subparagraph (A) does not apply to matters that are specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such Executive order.

(2) In any case in which the Council receives any information from a Federal agency, the Council shall not disclose such information to the public unless such agency is authorized to disclose such information pursuant to Federal law.

(d) CONSULTATION WITH THE PRESIDENT AND CONGRESS.—At the request of the President or the leaders of either or both Houses of Congress, the Council shall consult with the President or such leaders, or their representatives, on various issues related to United States economic competitiveness.

(e) GIFTS.—The Council may accept, use, and dispose of gifts or donations of services or property.

(f) USE OF THE MAILS.—The Council may use the United States mails in the same manner and under the same conditions as other Federal agencies.

(g) ADMINISTRATIVE AND SUPPORT SERVICES.—The Administrator of General Services shall provide to the Council, on a reimbursable basis, such administrative and support services as the Council may request.

(h) SUBCOUNCILS.—

(1) The Council shall convene an industry sector competitiveness subcouncil for each industry sector identified in the Council's annual report under section 207(b) which (A) is of national significance by reason of its employment or capital resources, its impact on national defense, or its importance as a supplier to, or customer of, other United States industries and (B) the Council determines would benefit from the creation of a subcouncil. The Council may also convene an indus-

try sector competitiveness subcouncil for any industry not so identified which the Council finds fulfills one or more of the criteria listed in section 207(b)(2) or may convene such a subcouncil for any other purpose.

(2) Any such subcouncil shall include representatives of business, labor, government, and other individuals or representatives of groups whose participation is considered by the Council to be important to developing a full understanding of the situation confronting the industry with which the subcouncil is concerned.

(3) Any such subcouncil shall assess the actual or potential dislocation, challenge, or opportunity for the industry with which the subcouncil is concerned and shall formulate specific recommendations for responses by business, government, and labor—

(A) to encourage adjustment and modernization of the industry involved;

(B) to monitor and facilitate industry responsiveness to opportunities identified under section 207(b)(2)(B); or

(C) to encourage the ability of the industry involved to compete in future markets identified under section 207(b)(2)(C).

(4) Any discussion held by any subcouncil or any working group operating under its auspices shall not be

considered to violate any Federal or State antitrust law.

(5) Any discussion held by any subcouncil or any working group operating under its auspices shall not be subject to the provisions of the Federal Advisory Committee Act.

(6) Any subcouncil shall terminate 30 days after making its recommendations, unless the Council specifically requests that the subcouncil continue in operation. If in a subsequent annual report by the Council, conditions which had previously required the creation of a subcouncil continue, or have recurred, the Council shall again convene a subcouncil, although the Council may, in its discretion, change the membership of the subcouncil as the Council considers appropriate.

(i) APPLICABILITY OF ADVISORY COMMITTEE ACT.—The provisions of section 14, and of subsections (e) and (f) of section 10, of the Federal Advisory Committee Act shall not apply to the Council.

SEC. 206. EFFECTS OF FOREIGN COMPETITION AND TECHNOLOGY ON DOMESTIC INDUSTRIES.

(a) AVAILABILITY OF INFORMATION.—The Council shall examine and make available to the public on a routine basis all unclassified international agreements on trade, science, and technology to which the United States is a party.

(b) MONITORING.—The Council shall continuously monitor, and maintain public records regarding, the effect of international trade and foreign activities in science and technology on all major United States industries and on such other United States industries as may be specified by the Council.

SEC. 207. REPORTS.

(a) REPORT ON COMPETITIVENESS POLICIES.—Within one year after the date of enactment of this Act, the Council shall transmit a report to the Congress and to the President containing recommendations of the Council for changes in any Federal policy necessary to implement effective, productive competitiveness policies, including the elimination, consolidation, or reorganization of government agencies. The Council shall pay particular attention to agencies specifically dealing with science and technology research and with international trade.

(b) COMPETITIVENESS GOALS.—

(1) The Council shall annually prepare and transmit to the President and to the Congress a report setting forth—

(A) the goals to achieve a more competitive United States economy;

(B) the policies needed to meet such goals;

(C) a summary of existing policies of the Federal Government affecting the competitiveness of the United States industries; and

(D) actual or foreseeable economic and technological developments, in the United States and abroad, affecting the competitive position of United States industry and of particular United States industry sectors.

(2) The report submitted under paragraph (1) shall identify and describe with particularity actual or foreseeable developments, in the United States and abroad, which—

(A) create a significant likelihood of a competitive challenge to, or of substantial dislocation in, an established United States industry;

(B) present significant opportunities for United States industries to compete in new geographical markets or product markets, or to expand their position in established markets; or

(C) create a significant risk that United States industries will be unable to compete successfully in significant future markets.

(3) The report submitted under paragraph (1) shall specify with particularity the industry sectors af-

fected by the developments described in the report pursuant to paragraph (2).

(4) The report submitted under paragraph (1) shall contain a statement of the findings and conclusions of the Council during the previous fiscal year, together with any recommendations of the Council for such legislative or administrative actions as the Council considers appropriate.

(c) REFERRAL OF REPORTS.—

(1) Each report submitted to the Congress under this section shall be referred to the appropriate committee or committees of each House of the Congress.

(2) The Council shall consult with each committee to which a report submitted under this section is referred and, following such consultation, each such committee shall submit to its respective House a report setting forth the views and recommendations of such committee with respect to the report of the Council.

SEC. 208. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated for fiscal year 1988 not to exceed $15,000,000 to carry out the provisions of this subtitle.

SEC. 209. DEFINITIONS.

For purposes of this subtitle—

(1) the term "Council" means the Council on Economic Competitiveness established under section 201;

(2) the term "member" means a member of the Council on Economic Competitiveness; and

(3) the term "United States" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, the Commonwealth of the Northern Mariana Islands, American Samoa, and any other territory or possession of the United States.

PART II—BUDGET IMPACT ON COMPETITION

SEC. 210. ANALYSES REQUIRED.

(a) STATEMENT TO BE INCLUDED IN BUDGET.—

(1) Section 2105(a) of title 31, United States Code, is amended by adding at the end thereof the following new paragraph:

"(26) an analysis, prepared by the Office of Management and Budget after consultation with the Chairman of the Council of Economic Advisers, of the budget's impact on the economic competitiveness of United States businesses and on the balance of payments of the United States, including a projection for the fiscal year for which the budget is submitted, based upon the

best information available at the time the budget is submitted, of—

"(A) the amount of borrowing by the Government in private credit markets;

"(B) new domestic savings (including personal savings, corporate savings, and the fiscal surplus of State and local governments);

"(C) net private domestic investment;

"(D) the merchandise trade and current accounts;

"(E) the net increase or decrease in foreign indebtedness (defined as net foreign investment); and

"(F) the estimated direction and extent of the influence of the Government's borrowing in private credit markets on United States dollar interest rates and on the real effective exchange rate of the United States dollar.".

(2) The Council shall submit to the Congress an annual review of the budget submitted by the President under section 2105(a) of title 31, United States Code, and a review of the analysis prepared by the Office of Management and Budget of the budget's impact on the economic competitiveness of the United States included in such budget under paragraph (26) of such section.

(b) STATEMENT TO BE INCLUDED IN COMMITTEE REPORT ACCOMPANYING CONCURRENT RESOLUTION ON THE BUDGET.—Section 301(e) of the Congressional Budget Act of 1974 (2 U.S.C. 632(e)) is amended by striking out "and" at the end of paragraph (8), by striking out the period at the end of paragraph (9) and inserting in lieu thereof "; and", and by adding at the end thereof the following new paragraph:

"(10) an analysis, prepared after consultation with the Director of the Congressional Budget Office, of the concurrent resolution's impact on the economic competitiveness of United States businesses and the balance of payments of the United States, including a projection, for the fiscal year covered by the concurrent resolution, based upon the best information available at the time the report is made, of—

"(A) the amount of borrowing by the Government in private credit markets;

"(B) net domestic savings (including personal savings, corporate savings, and the fiscal surplus of State and local governments);

"(C) net private domestic investment;

"(D) the merchandise trade and current accounts;

"(E) the net increase or decrease in foreign indebtedness (defined as net foreign investment); and

"(F) the estimated direction and extent of the influence of the Government's borrowing in private credit markets on United States dollar interest rates and on the real effective exchange rate of the United States dollar.".

(c) EFFECTIVE DATE.—This section and the amendments made by this section shall apply with respect to each of the fiscal years 1989, 1990, 1991, and 1992, and shall be carried out with respect to each budget submitted by the President under section 2105(a) of title 31, United States Code, for each such fiscal year and with respect to each concurrent resolution on the budget for each such fiscal year.

Subtitle B—National Trade Data Bank

SEC. 211. DEFINITIONS.

For purposes of this subtitle—

(1) the term "Committee" means the National Trade Data Committee;

(2) the term "Data Bank" means the National Trade Data Bank; and

(3) the term "Executive agency" has the same meaning as in section 105 of title 5, United States Code.

SEC. 212. NATIONAL TRADE DATA COMMITTEE.

(a) ESTABLISHMENT.—There is established the National Trade Data Committee.

(b) MEMBERSHIP.—The Committee shall consist of—

(1) the United States Trade Representative;

(2) the Secretary of Agriculture;

(3) the Secretary of Defense;

(4) the Secretary of Commerce;

(5) the Secretary of Labor;

(6) the Secretary of the Treasury;

(7) the Secretary of State;

(8) the Director of the Office of Management and Budget;

(9) the Director of Central Intelligence;

(10) the Chairman of the Federal Reserve Board;

(11) the Chairman of the International Trade Commission; and

(12) such other members as may be appointed by the President from full-time officers or employees of the Federal Government.

(c) CHAIRMAN.—The Secretary of Commerce shall be chairman of the Committee.

(d) DESIGNEES.—Except for the Chairman or a member appointed pursuant to paragraph (12) of subsection (b), any member of the Committee may appoint a designee to serve in place of such member on the Committee.

(e) MEETINGS.—

(1) Meetings of the Committee shall be at the call of the Chairman or upon written request of 50 percent of the members of the Committee.

(2) A majority of the Committee members shall constitute a quorum.

(3) Decisions of the Committee shall be by majority of the members present and voting at a meeting.

SEC. 213. FUNCTIONS OF THE COMMITTEE.

The Committee shall—

(1) formulate and implement a comprehensive economic and trade information policy to assure the timely collection of accurate data on trends in international economics and trade;

(2) direct the Secretary of Commerce to establish a National Trade Data Bank in accordance with section 216 in order to provide the private sector and government officials efficient access to economic and trade data collected by the Federal Government for purposes of policymaking and export promotion, and oversee the design and implementation of the Data Bank;

(3) develop and enforce guidelines for the collection, as may be otherwise authorized by law, of data relating to international economics and trade by Executive agencies in order to—

(A) ensure that such data is—

(i) timely;

(ii) accurate;

(iii) reasonably complete; and

(iv) easily accessible to users; and

(B) contribute to the establishment of international data collection and reporting practices;

(4) publish such reports and publications as the Committee finds necessary to carry out the purposes of this subtitle;

(5) formulate policies to encourage international organizations and foreign countries to adopt systems to report foreign trade statistics that include—

(A) standard classifications for products and services;

(B) standard valuation procedures; and

(C) accurate and timely reporting procedures; and

(6) present recommendations to Congress for legislative changes needed to improve the accuracy, timeliness, and relevancy of United States trade information.

SEC. 214. COOPERATION AMONG EXECUTIVE AGENCIES.

(a) INFORMATION.—Each Executive agency shall furnish to the Committee, upon request of the Chairman, such

information as the Committee considers necessary to carry out its functions.

(b) ADOPTION OF POLICIES.—Each Executive agency shall adopt and implement the economic and trade information policy formulated by the Committee under section 213(1).

SEC. 215. CONSULTATION WITH THE PRIVATE SECTOR AND GOVERNMENT OFFICIALS.

The Committee shall regularly consult with representatives of the private sector and officials of Executive agencies and State and local governments to assess the adequacy of United States trade information. The Committee shall seek recommendations on how trade information can be made more accessible, understandable, and relevant. The Committee shall seek recommendations as to what data shall be included in the export promotion data system in the Data Bank.

SEC. 216. ESTABLISHMENT OF THE DATA BANK.

(a) ESTABLISHMENT.—After receiving instructions from the Committee, the Secretary of Commerce shall establish and manage the Data Bank. The Data Bank shall consist of two data systems. One such data system shall be a system containing economic and trade data collected by the Federal Government which is useful to policymakers and analysts concerned with international economics and trade, and

one such data system shall be a system containing economic and trade data collected by the Federal Government which is useful to business firms and Federal and State government officials interested in export promotion.

(b) CONTENT OF DATA SYSTEMS.—

(1) One data system of the Data Bank shall include current and historical information determined useful (after the consultation required by section 215) to policymakers and analysts concerned with international economics and trade which is compiled or obtained by all Executive agencies. Such information shall not identify parties to transactions. Such information shall include—

(A) data on merchandise imports and exports for the United States and other countries, including—

(i) aggregate import and export data for the United States and for each foreign country;

(ii) industry-specific import and export data for each foreign country;

(iii) product and service specific import and export data for the United States;

(iv) market penetration ratios for imports and country of origin ratios for imports; and

(v) foreign destinations for exports of the United States, classified in rank order of foreign countries;

(B) data on international service transactions;

(C) information on international capital markets, including—

(i) interest rates;

(ii) exchange rates; and

(iii) foreign direct investment in the United States economy;

(D) international labor market information, including—

(i) internationally comparable wage rates for major industries;

(ii) international unemployment rates; and

(iii) trends in international labor productivity;

(E) information on international government policies affecting the composition of international trade, including—

(i) import and export restrictions;

(ii) export financing policies;

(iii) tax policies; and

(iv) labor market policies;

(F) import and export data for the United States on a State-by-State basis, including—

(i) data concerning the country shipping the import, the State of first destination, and the original port of entry for imports of goods and services; and

(ii) data concerning the State of the exporter, the port of departure, and the country of first destination for exports of goods and services; and

(G) any other economic and trade data collected by the Federal Government that the Committee determines to be useful in carrying out the purposes of this subtitle.

(2) One data system of the Data Bank shall include information on those economies and foreign markets which are determined (after the consultation required by section 215) to be of the greatest commercial value to private sector businesses firms engaged in export activities and Federal and State agencies that promote exports. Such information shall include—

(A) information on business activities in foreign countries, including information concerning—

(i) general economic conditions and demographics;

(ii) common business practices;

(iii) tariffs and trade barriers; and

(iv) other laws and regulations regarding imports and licensing;

(B) information on specific industrial sectors within foreign countries, including information concerning—

(i) size of markets;

(ii) distribution of products;

(iii) competition;

(iv) major applicable laws, regulations, specifications, and standards;

(v) appropriate government officials; and

(vi) trade associations and other business contacts;

(C) information on specific business opportunities in foreign countries;

(D) market research, including industry and demographic trends for each foreign country with

lists of marketing contacts and lists of foreign firms;

(E) information on various forms of protection for intellectual property rights, including product and process patent, copyright, trademark, and mask work (as such term is defined in section 901(a)(3) of title 17, United States Code), for each nation for at least the 2 most recently completed calendar years;

(F) export financing information, including the availability of funds for United States exporters and foreign competitors;

(G) information regarding the trade actions of foreign governments; and

(H) any other similar information, that the Committee determines to be useful in carrying out the purposes of this subtitle, on these economic sectors and foreign markets which are determined to be of greatest interest to—

(i) business firms in the private sector which are engaged in activities relating to exports; and

(ii) Federal and State agencies that promote exports.

SEC. 217. OPERATION OF THE DATA BANK.

The Secretary of Commerce shall manage the Data Bank to provide the most efficient data retrieval system or systems possible. Such system or systems shall—

(1) be designed to utilize appropriate data processing and retrieval technology in monitoring, organizing, analyzing, and disseminating the data and information contained in the Data Bank;

(2) use the most effective and meaningful means of organizing and making such information available to—

(A) United States business firms;

(B) United States workers;

(C) United States industry associations;

(D) United States agricultural interests;

(E) State and local economic development agencies; and

(F) other interested United States persons who could benefit from such information; and

(3) be of such quality and timeliness and in such form as to assist coordinated trade strategies for the United States.

SEC. 218. INFORMATION ON THE SERVICE SECTOR.

(a) SERVICE SECTOR INFORMATION.—The Committee and the Secretary of Commerce shall ensure that, to the extent possible, there is included in the Data Bank informa-

tion on service sector economic activity that is at least as complete and timely as information on economic activity in the merchandise sector.

(b) SURVEY.—The Secretary of Commerce shall provide a broad base of quarterly information on the service sector of the economy, and a new benchmark survey of unaffiliated service transactions, including transactions with respect to—

(1) banking services;

(2) computer software services;

(3) brokerage services;

(4) transportation services;

(5) travel services;

(6) engineering services; and

(7) construction services.

(c) INDEX OF HEADING INDICATORS.—The Committee shall provide an index of leading indicators which includes the measurement of service sector activity in direct proportion to the contribution of the service sector to the gross national product of the United States.

SEC. 219. EXCLUSION OF INFORMATION.

The Data Bank shall not include any information—

(1) which is collected by the Federal Government in connection with any investigation;

(2) the disclosure of which to the public is prohibited under any other provision of law; or

(3) that is specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such Executive order.

SEC. 220. NONDUPLICATION.

The Committee and the Secretary of Commerce shall ensure that information systems created or developed pursuant to this subtitle do not unnecessarily duplicate information systems available from other Federal agencies or from the private sector.

SEC. 221. COLLECTION OF DATA.

Except as provided in section 218, nothing in this subtitle shall be considered to grant independent authority to the Federal Government to collect any data or information from individuals or entities outside of the Federal Government.

SEC. 222. FEES AND ACCESS.

The Secretary of Commerce shall provide reasonable public services and access (including electronic access) to any information maintained as part of the Data Bank and may charge reasonable fees consistent with section 552 of title 5, United States Code.

SEC. 223. SCHEDULE FOR IMPLEMENTATION.

The Committee shall direct the Secretary of Commerce to complete the establishment of the Data Bank no later than two years after the enactment of this Act.

SEC. 224. REPORT TO CONGRESS.

One year after the enactment of this Act, and annually thereafter for three consecutive years, the Chairman shall submit a report to Congress—

(1) assessing the current quality and comprehensiveness of, and the ability of the public and of private entities to obtain access to, trade data;

(2) describing actions taken pursuant to this subtitle, particularly—

(A) actions taken during the 3-month period beginning on the date of enactment of this Act to provide the new benchmark survey described in section 218(b); and

(B) actions taken during the 1-year period beginning on the date of enactment of this Act to provide the information on services described in subsections (a) and (b)(2) of section 218;

(3) describing all other actions taken and planned to be taken pursuant to this subtitle;

(4) recommending executive and legislative actions which would ensure that United States citizens and firms obtain access to the data banks of foreign

countries that is similar to the access to the Data Bank provided to foreign citizens and firms;

(5) recommending other legislative actions which further the purposes of this subtitle; and

(6) including comments on the implementation of the Data Bank by the private sector and by State agencies that promote exports.

Subtitle C—Financial Acquisitions Review

SEC. 231. SHORT TITLE.

This subtitle may be cited as the "Financial Acquisitions Review Act of 1987".

SEC. 232. FINDINGS.

The Congress finds that—

(1) United States financial enterprises attempting to conduct business in certain foreign countries have not been accorded full national treatment allowing equal competitive opportunity with their host country counterparts;

(2) United States financial concerns attempting to conduct business in certain foreign countries are denied many of the market opportunities available to foreign financial concerns in the United States;

(3) the nature and range of impediments to equal competitive opportunities for United States financial concerns are extremely broad, and include—

(A) restrictions on the capitalization of individual banks, limits on offshore funding, application of prudential lending limits, and recommended lending to particular borrowers;

(B) segmented financial structures that limit United States expansion into areas which remain the preserve of special classes of banking institutions;

(C) refusal to approve United States bank entry or expansion, even though such approvals are allowed by national law;

(D) prohibitions on expanding automated teller and electronic fund services beyond existing branch networks;

(E) numerical caps on licenses for United States and other foreign banks;

(F) prohibitions on de novo branches and subsidiaries, and denial of permission for expansion via mergers and acquisitions;

(G) interest rate controls on deposits and loans which place United States institutions at a competitive disadvantage;

(H) discriminatory tax treatment, and restrictions on dealings with official government agencies;

(I) restrictions on numbers of branches;

(J) funding, investment, and collateralization requirements;

(K) restrictions on financial services that can be offered;

(L) lack of competitive opportunities relative to nationalized financial institutions;

(M) restrictions on entry into electronic banking networks;

(N) inability to offer innovative financial services in which United States concerns have a competitive advantage;

(O) restrictions on acquisitions of stock exchange seats; and

(P) foreign exchange controls.

SEC. 233. DEFINITIONS.

For the purpose of this subtitle—

(1) the term "Board" means the Interagency Financial Acquisitions Review Board established by section 234;

(2) the term "acquisition" means the establishment of a United States business concern, the acquisi-

tion of 5 percent or more of the outstanding equity securities of a United States business concern, or the acquisition of any other security, share, or interest constituting 5 percent or more of the equity or assets of a United States business concern;

(3) a business concern provides financial services if that concern—

(A) acts as a broker or dealer as defined in section 3 of the Securities Exchange Act of 1934;

(B) acts as a primary dealer of United States Government securities; or

(C) is a depository institution as defined in section 19 of the Federal Reserve Act;

(4) "foreign business concern" means any entity, including an entity wholly or partially owned by a foreign government, 5 percent or more of which is owned or controlled by individuals or entities which are not citizens or nationals of the United States, or by any combination of such individuals and any foreign government agency or instrumentality; and

(5) "United States business concern" means any corporation or other entity which has its principal place of business in the United States or which is organized under the laws of the United States or of any State, territory, commonwealth, or possession; and any

foreign subsidiary or affiliate (including any permanent foreign establishment) of any United States concern which is controlled in fact by such United States business concern, as determined under regulations of the Board.

SEC. 234. ESTABLISHMENT OF BOARD.

There is established as independent instrumentality in the executive branch an Interagency Financial Acquisitions Review Board which shall consist of—

(1) the Secretary of the Treasury, who shall be the chairman of the Board;

(2) the Secretary of Commerce;

(3) the United States Trade Representative;

(4) the Chairman of the Board of Governors of the Federal Reserve System;

(5) the Chairman of the Board of Governors of the Federal Deposit Insurance Corporation;

(6) the Comptroller of the Currency;

(7) the Chairman of the Federal Home Loan Bank Board; and

(8) the Chairman of the Securities and Exchange Commission.

SEC. 235. FUNCTIONS OF THE BOARD.

(a) REVIEW OF PROPOSED ACQUISITIONS.—It shall be the function of the Board to review any proposed acquisi-

tion by a foreign business concern of any United States business concern which provides financial services.

(b) CONSIDERATION.—In carrying out its function, the Board shall take into account the extent to which the country where a foreign concern seeking to make an acquisition has its principal place of business provides—

(1) the same competitive opportunity to United States financial business concerns as it provides to foreign financial concerns in the foreign market;

(2) opportunities for United States business concerns to acquire foreign financial business concerns within such foreign country that are equivalent to the opportunities for foreign concerns to acquire United States financial business concerns; and

(3) market opportunities as great as those afforded foreign concerns in United States financial markets.

(c) TRANSMISSIONS OF DOCUMENTS TO BOARD.—Prior to taking any final action on a proposed acquisition of a United States business concern which provides financial services by a foreign business concern, an agency referred to in paragraphs (4) through (8) of section 234 shall transmit to the Board copies of all relevant documents and a draft of its proposed order or other action with respect to the acquisition.

(d) LIMITATIONS ON FINAL ACTIONS.—No final action permitting such an acquisition may be taken by an agency—

(1) unless—

(A) 30 days have expired after transmittal of the information required by subsection (c); or

(B) the Board notifies the agency that it has no objection to the proposed acquisition prior to the expiration of such 30-day period; or

(2) if, based on the factors set forth in subsection (b), the Board notifies the agency during the 30-day period that it objects to the proposed acquisitions.

SEC. 236. POWERS.

In addition to the powers granted to the Board elsewhere in this subtitle, the Board shall have the power—

(1) to sue and be sued, complain and defend, in any court, State or Federal;

(2) to adopt, alter, and use a seal, which shall be judicially noticed;

(3) to adopt, amend, and repeal regulations relating to the conduct of its business and the exercise of all other rights and powers granted to it by this subtitle;

(4) to lease, purchase, accept gifts or donations of or otherwise acquire, to own, hold, improve, use, or otherwise deal in or with, and to sell, convey, mortgage,

pledge, lease, exchange or otherwise dispose of, any property, real, personal or mixed, or any interest therein, wherever situated;

(5) to appoint such officers, attorneys, employees, and agents as may be required; and

(6) to enter into contracts, to execute instruments, to incur liabilities, and to do any and all other acts and things as may be necessary or incidental to the conduct of its business.

SEC. 237. ANNUAL REPORT.

The Board shall transmit to the President and the Congress a report on its activities not later than December 31 of each year.

SEC. 238. AUTHORIZATION.

There are authorized to be appropriated not to exceed $600,000 to carry out this subtitle.

Subtitle D—Commission on United States Trade in the 1990's

SEC. 241. ESTABLISHMENT OF COMMISSION.

(a) ESTABLISHMENT.—There is hereby established the Commission on United States Trade in the 1990's (hereafter in this section referred to as the "Commission").

(b) MEMBERSHIP.—

(1) The Commission shall be composed of 18 members as follows:

(A) 6 members appointed by the President in accordance with paragraph (2)(A),

(B) 6 members appointed by the President pro tempore of the Senate from Members of the Senate in accordance with paragraph (2)(B), upon the recommendation of the majority leader or the minority leader of the Senate with respect to members appointed from the political party of that leader, and

(C) 6 Members of the House of Representatives appointed by the Speaker of the House of Representatives in accordance with paragraph (2)(B).

(2)(A) The President shall appoint as members of the Commission under paragraph (1)(A) individuals who are especially qualified to serve on the Commission due to the education, training, or experience of such individuals. Of the members appointed by the President under such paragraph—

(i) at least 5 members shall be individuals who are not officers or employees of the United States,

(ii) at least 1 member shall be a representative of business,

(iii) at least 1 member shall be a representative of a labor organization,

(iv) at least 1 member shall be a representative of agricultural interests,

(v) at least 1 member shall be a representative of State Government, and

(vi) not more than 3 members shall be members of the same political party.

(B)(i) In appointing members to the Commission, the President pro tempore of the Senate and the Speaker of the House of Representatives shall give special consideration to the appointment of Members of the Senate or the House of Representatives, as the case may be, who are members of the committees of their respective Houses which have legislative jurisdiction over, or special concerns with respect to, matters relating to international trade.

(ii) Not more than 3 members of the Commission appointed under paragraph (1)(B) shall be members of the same political party, and not more than 3 members of the Commission appointed under paragraph (1)(C) shall be members of the same political party.

(3) The first 18 appointments to the Commission shall be made before the later of—

(A) the date which is 30 days after the date of enactment of this Act, or

(B) January 1, 1988.

(4) A vacancy in the Commission shall be filled in the manner in which the original appointment was made.

(5) Members of the Commission shall be appointed to serve for the life of the Commission.

(6)(A) Each member of the Commission appointed under paragraph (1)(A) who is not an officer or employee of the United States shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for grade GS–18 of the General Schedule under section 5332 of title 5, United States Code, for each day (including traveltime) during which such member is engaged in the actual performance of the duties of the Commission. All members of the Commission who are officers or employees of the United States shall serve without additional compensation.

(B) While away from their homes or regular places of business in the performance of services for the Commission, all members of the Commission shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under section 5702 of title 5, United States Code.

(c) MEETINGS.—

(1) Nine members of the Commission shall constitute a quorum, but a lesser number may hold hearings.

(2) The Chairman and Vice Chairman of the Commission shall be elected by and from the members of the Commission for the life of the Commission.

(3) The Commission shall meet at the call of the Chairman or a majority of its members.

(d) PERSONNEL.—

(1) The Chairman of the Commission, in consultation with the Vice Chairman, and without regard to the civil service laws, rules, and regulations, is authorized to appoint and fix the compensation of a staff director and such other additional personnel as may be necessary to enable the Commission to carry out its functions.

(2) Any Federal employee may be detailed to the Commission without reimbursement, and such detail shall be without interruption or loss of civil service status or privilege.

(3) The Commission may procure temporary and intermittent services under section 3109(b) of title 5, United States Code, at daily rates of compensation for individuals which do not exceed the daily equivalent of

the annual rate of basic pay prescribed for GS–18 of the General Schedule under section 5332 of such title.

(e) POWERS.—

(1) The Commission may, for the purpose of carrying out this subtitle, hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence, as the Commission considers appropriate.

(2) The Commission may secure directly from any Federal agency information necessary to enable the Commission to carry out the provisions of this section. Upon request of the Chairman of the Commission, the head of such agency shall furnish such information to the Commission, except that this section does not apply to matters that are specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such Executive order.

(3) The Commission may accept, use, and dispose of gifts or donations of services or property.

(4) The Commission may use the United States mails in the same manner and under the same conditions as other departments and agencies of the United States.

(5) The Administrator of General Services shall provide to the Commission on a reimbursable basis such administrative and support services as the Commission may request.

(f) STUDY.—The Commission shall study and make recommendations concerning international trade and export policies and practices of the United States, including recommendations for such changes in laws and regulations as may be required in order to—

(1) facilitate the administration of the trade and export functions of the Federal Government;

(2) enhance export growth;

(3) provide for removal of trade barriers;

(4) provide for common understanding of international trade by businesses;

(5) develop expertise on foreign business practices and trade issues; and

(6) accomplish such other purposes as the Commission considers appropriate.

(g) SPECIFIC TOPICS OF REVIEW.—In conducting the study required under subsection (f), the Commission shall review and make recommendations concerning—

(1) likely impediments to exporting by United States industries in the 1990's, including—

(A) regulations, paperwork requirements, and procedures imposed by the United States Government, especially export controls,

(B) the impact of the antitrust laws on exports,

(C) insufficient financing, Government credits, and incentives for export expansion, and the lack of Export-Import Bank and the Foreign Credit Insurance Association support and responsiveness,

(D) the lack of a unified, coherent, and clearly enunciated United States Government policy which supports the export community and which is carried out by all Federal agencies, and

(E) the lack of research and development capabilities to help improve the ability of American industries to compete with foreign industries;

(2) the likely propensity of the United States to import goods and services in the 1990's, and the impact of those importations upon American economic life and economic security;

(3) the competitiveness of firms manufacturing products in the United States in the 1990's, and ways and means of enhancing that competitiveness;

(4) the likely relationships between trade and international monetary policy in the 1990's, including the need to relieve trade policy of major burdens created by the recurrence of currency exchange rate misalignments;

(5) the likely state of vitality in the United States economy during the 1990's;

(6) the role for international trade activities by State and local governments in the 1990's; and

(7) the organizational structures under which other industrial nations, such as Japan, Great Britain, Canada, and West Germany, carry out the international trade activities of those nations.

(h) Report.—By no later than January 1, 1989, the Commission shall transmit to the President and to the Congress a report containing a detailed statement of the study conducted by the Commission under this section and the recommendations of the Commission with respect to the matters specified in subsections (f) and (g), including any other recommendations for legislation the Commission considers appropriate. The Commission may issue such interim reports as the Commission considers appropriate.

(i) Termination.—The Commission shall terminate on January 1, 1989.

SEC. 242. AUTHORIZATION.

For fiscal years 1988 and 1989, there are authorized to be appropriated such sums as may be necessary to carry out the provisions of this subtitle.

Subtitle E—Studies

SEC. 251. STUDY OF UNITED STATES BARRIERS TO UNITED STATES EXPORTS.

(a) STUDY.—The Secretary of Commerce shall annually conduct a study to—

(1) identify barriers that exist in the United States to United States exports;

(2) estimate the increased value of United States exports that would result from the elimination of such barriers; and

(3) examine national security concerns and other rationales for such barriers.

(b) REPORT.—The Secretary of Commerce shall submit an annual report to Congress on the study conducted under subsection (a). The report shall include any recommendations of the Secretary regarding the subject of such study.

SEC. 252. RESOURCE NEEDS.

(a) STUDY.—The Secretary of Commerce shall conduct a study to determine, by employing input/output analysis of key industrial sectors, the labor and physical resource needs of—

(1) the entire United States economy;

(2) critical technologies; and

(3) emerging technologies.

(b) REPORT.*—Within three years after the date of enactment of this Act, the Secretary of Commerce shall submit a report to Congress on the study conducted under subsection (a). The report shall include any recommendations of the Secretary regarding the subject of such study.*

SEC. 253. MANUFACTURING BASE.

(a) STUDY.*—The Secretary of Commerce shall conduct a study to determine the relationship between the manufacturing base and other commercial activity, especially in the area of services of high technology. The study should include—*

(1) estimates and descriptions of jobs outside of the manufacturing sector of the economy that are dependent on the manufacturing sector;

(2) estimates and descriptions of additional economic relationships between manufacturing and other indicators of commercial economic strength; and

(3) estimates and descriptions of the effect on the United States economy, and especially high growth industries, of further deindustrialization.

(b) REPORT.*—After one year, the Secretary of Commerce shall submit a report to Congress on the study conducted under subsection (a). The report shall include any*

recommendations of the Secretary regarding the subject of such study.

SEC. 254. IMPACT OF FOREIGN FINANCIAL AND REGULATORY SYSTEMS.

(a) STUDY.—The Board of Governors of the Federal Reserve System shall conduct an annual study to determine the impact on the domestic and foreign competitiveness of United States firms caused by the financial and regulatory systems (including antitrust laws) of those foreign countries identified in the latest report submitted by the United States Trade Representative to Congressional committees under section 181(b)(1) of the Trade Act of 1974 (19 U.S.C. 2241(b)(1)) as foreign countries which engage in acts or practices, or have policies, that constitute barriers to trade or distortions of trade.

(b) REPORT.—The Board of Governors of the Federal Reserve System shall submit to Congress an annual report on the study conducted under subsection (a). The report shall include any recommendations of such Board regarding the subject of such study.

Subtitle F—Interagency Coordinating Committee on Federal Participation in Sematech

SEC. 261. SHORT TITLE; FINDING.

(a) SHORT TITLE.—This subtitle may be cited as the "Interagency Coordinating Committee on Federal Participation in Sematech Act of 1987".

(b) FINDING.—The Congress finds that a cooperative initiative between a consortium of United States semiconductor device, equipment, and materials manufacturers, and Federal agencies (including the national laboratories and academic institutions) for the purpose of conducting research and development in the area of semiconductor manufacturing is in the national economic and security interests of the United States.

SEC. 262. ESTABLISHMENT.

(a) COMPOSITION.—There is established the Interagency Coordinating Committee on Federal Participation in Sematech. The Committee shall be composed of—

(1) the Secretary of Defense, who shall be Chairman;

(2) the Secretary of Commerce;

(3) the Secretary of Energy;

(4) the Director of the National Science Foundation; and

(5) the Chairman of the Federal Laboratory Consortium for Technology Transfer.

(b) REPORT.—*Within 90 days after the date of enactment of this Act, the Committee, after consultation with the Council, shall prepare and transmit to the Congress a report containing the recommendations of the Committee concerning participation by the Federal Government in Sematech. The report shall include—*

(1) proposals for the amount of Federal funds that should be obligated and expended for Federal participation in Sematech during each of the fiscal years 1988, 1989, 1990, 1991, and 1992;

(2) proposals for areas of research to be conducted by Sematech and supported in whole or in part by Federal financial assistance;

(3) recommendations for the forms and types of Federal financial assistance to be offered by the Federal Government to Sematech;

(4) recommendations for the obtaining of patents for, and the licensing of products developed by Sematech;

(5) recommendations for facilitating the compliance of Sematech activities with the antitrust laws; and

(6) a description of the public purposes that will be achieved by the participation of the Federal Government in Sematech and of the national security and economic security interests that will be served by such participation.

(c) QUORUM.—Three members of the Committee shall constitute a quorum. No action may be taken by the Committee unless a majority of the members of the Committee vote to take such action.

(d) MEETINGS.—The Committee shall meet at the call of the Chairman or a majority of its members.

(e) EXECUTIVE DIRECTOR AND STAFF.—

(1) The Committee shall appoint an Executive Director who shall be compensated at a rate not to exceed the rate of basic pay prescribed for level V of the Executive Schedule under section 5316 of title 5, United States Code. With the approval of the Committee, the Executive Director may appoint and fix the compensation of not more than six additional staff members for the Committee.

(2) Upon request of the Committee, the head of any Federal agency is authorized to detail, on a reimbursable basis, any of the personnel of such agency to the Committee to assist the Committee in carrying out its duties under this subtitle.

(3) The Secretary of Defense shall provide to the Committee such administrative and support services as the Committee may request.

(f) POWERS.—

(1) For the purpose of carrying out this subtitle, the Committee may hold such meetings, and sit and act at such times and places, as the Committee considers appropriate.

(2) Any member or employee of the Committee may, if authorized by the Committee, take any action which the Committee is authorized to take by this subtitle.

(3) The Committee may secure directly from any Federal agency such information as may be necessary to enable the Committee to carry out this subtitle. Upon request of the Chairman of the Committee, the head of such agency shall furnish such information to the Committee.

SEC. 263. ADVISORY COUNCIL.

(a) FUNCTIONS.—There is established the Advisory Council on Federal Participation in Sematech. The Council shall provide advice to the Committee concerning the policies, programs, and activities of the Committee.

(b) COMPOSITION.—The Council shall be composed of 7 members appointed by the President, of which—

(1) 4 members shall be eminent individuals in the semiconductor industry and related industries;

(2) 2 members shall be eminent individuals in the fields of technology and defense; and

(3) 1 member shall be an individuals representing small businesses.

(c) Terms of Office.—Each member of the Council appointed under subsection (b) shall be appointed for a term of 3 years, except that of the members first appointed, 2 shall be appointed for a term of 1 year, 2 shall be appointed for a term of 2 years, and 3 shall be appointed for a term of 3 years, as designated by the President at the time of appointment.

(d) Vacancies.—A vacancy in the Council shall be filled in the same manner as the original appointment was made. Any member appointed to a fill a vacancy for an unexpired term shall be appointed for the remainder of such term. A member of the Council may serve after the expiration of the member's term until a successor has taken office.

(e) Effect of Vacancies.—A vacancy in the Council shall not affect its powers.

(f) Chairman.—The members of the Council shall elect a Chairman from among the members of the Council.

(g) Quorum.—Four members of the Council shall constitute a quorum.

(h) CALL OF MEETINGS.—The Council shall meet at the call of the Chairman or a majority of its members.

(i) COMPENSATION.—

(1) Each member of the Council shall serve without compensation.

(2) While away from their homes or regular places of business in the performance of duties for the Council, all members of the Council shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under sections 5702 and 5703 of title 5, United States Code.

SEC. 264. PROVISION OF FEDERAL SUPPORT.

(a) RESEARCH.—The Committee shall—

(1) monitor and consult with the Board of Directors of Sematech on areas of research to be conducted by Sematech and supported by Federal financial assistance; and

(2) with Sematech, develop mechanisms to ensure that such research is directed toward the most promising and productive areas after the consideration of knowledge obtained from prior and current research and development;

(3) make grants to, and enter into memoranda of understanding with, Sematech to support research projects;

(4) act as a liaison between Federal agencies and private participants in Sematech;

(5) ensure that appropriate procedures and guidelines are established with respect to patents and licensing arrangements, facilitate compliance of Sematech activities with the antitrust laws, and disseminate results of research conducted by Sematech without violating proprietary agreements; and

(6) in consultation with Sematech, take such action as may be necessary to ensure that an open and fair process is established and followed to select a site for the conduct of Sematech's activities, including the development of criteria for the selection of such site which provide for the balancing of the continuing research needs of Sematech with the need for the timely commencement of such research.

(b) FEDERAL SHARE.—The Federal share of the total cost of all projects conducted by Sematech and supported by the Federal Government in any fiscal year shall not exceed 50 percent of such total cost, as determined by the Committee.

(c) REPORTS.—Within 1 year after the date of enactment of this Act, and annually thereafter, the Committee shall prepare and transmit to the President and the Congress a report on the activities conducted by the Committee under this section during the preceding 12 month period, including a description of any grant, contract, or memorandum of understanding made under this section and the amount obligated and expended under such grant, contract, or memorandum of understanding.

(d) LIMITATION ON CONTRACT AUTHORITY.—The authority of the Committee to enter into grants, contracts, and memoranda of understanding under this subtitle shall be to such extent or in such amounts as are provided in appropriation Acts.

SEC. 265. REPORTS AND AUDITS.

(a) REPORTS BY SEMATECH.—As a condition of receiving any grant, contract, or cooperative agreement under this subtitle, the Committee shall require Sematech to prepare and submit to the Committee annual reports on its activities under this subtitle. Such reports shall be in such form and contain such information as the Committee determines (after consultation with the Comptroller General of the United States) to be necessary (1) to determine whether funds were expended in accordance with this subtitle, (2) to secure a description of the activities of Sematech under this

subtitle, and (3) to secure a record of the purposes for which funds were spent, of the recipients of such funds, and of the progress made toward achieving the purposes for which the funds were provided. Copies of the report shall be provided, upon request, to any interested person (including any public agency).

(b) AUDITS.—

(1) The Committee shall ensure that appropriate fiscal control and fund accounting procedures are established as may be necessary to assure the proper disbursal of and accounting for Federal funds paid to Sematech under this subtitle.

(2) The Committee shall establish appropriate procedures for financial and compliance audits by Sematech of any funds provided to Sematech under this subtitle. Such audits shall be performed biennially, shall cover expenditures in each fiscal year, and shall be conducted in accordance with standards established by the Comptroller General for the audit of governmental organizations, programs, activities, and functions. Within 30 days after completion of an audit under this paragraph, a copy of the audit report shall be transmitted to the Committee and shall be made available for public inspection. For purposes of this paragraph, the term "financial and compliance audit"

means an audit to determine whether the financial statements of Sematech present fairly the financial position and the results of financial operations in accordance with generally accepted accounting principles, and whether Sematech has complied with laws and regulations that may have a material effect upon the financial statements.

(3) Sematech shall, after being provided by the Committee with adequate notice and opportunity for a hearing, repay to the United States amounts found not to have been expended in accordance with the requirements of this subtitle or any grant, contract, or cooperative agreement made under this subtitle.

(4) The Comptroller General of the United States shall, from time to time, evaluate the expenditures by Sematech of grants, contracts, and cooperative agreements under this subtitle in order to assure that expenditures are consistent with the provisions of this subtitle.

(c) AVAILABILITY OF RECORDS.—Sematech shall make appropriate books, documents, papers, and records available to the Committee or the Comptroller General of the United States, or any of their duly authorized representatives, for examination, copying, or mechanical reproduction

on or off the premises of Sematech upon a reasonable request therefor.

SEC. 266. DEFINITIONS.

For the purpose of this subtitle—

(1) the term "Committee" means the Interagency Committee on Federal Participation in Sematech established by section 262;

(2) the term "Council" means the Advisory Council established by section 263;

(3) the term "Federal agency" has the meaning given to the term "agency" in section 551(1) of title 5, United States Code;

(4) the term "Federal financial assistance" means a grant, contract, or cooperative agreement; and

(5) the term "Sematech" means a consortium of United States semiconductor manufacturers, materials manufacturers, and equipment manufacturers, established for the purpose of conducting research concerning advanced semiconductor manufacturing techniques and developing techniques to adapt manufacturing expertise to a variety of semiconductor products.

SEC. 267. AUTHORIZATION OF APPROPRIATIONS.

(a) ADMINISTRATION.—To carry out sections 262 and 263, there are authorized to be appropriated such sums as

may be necessary for each of the fiscal years 1988, 1989, 1990, 1991, and 1992.

(b) FEDERAL SUPPORT.—To carry out section 264, there are authorized to be appropriated $100,000,000 for each of the fiscal years 1988, 1989, 1990, 1991, and 1992.

Subtitle G—State Job Bank Systems; Pension Study

SEC. 271. STATE JOB BANK SYSTEMS.

(a) ESTABLISHMENT OF SYSTEMS.—Title V of the Job Training Partnership Act is amended by adding at the end thereof the following new section:

"STATE JOB BANK SYSTEMS

"SEC. 505. (a) The Secretary shall carry out this section with sums made available pursuant to subsection (d) of this section.

"(b) The Secretary shall make such sums available through the United States Employment Service for the development and implementation of job bank systems in each State. Such systems shall be designed to use computerized electronic data processing and telecommunications systems for such purposes as—

"(1) identifying job openings and referring jobseekers to job openings, with continual updating of such information;

"(2) providing information on occupational supply and demand; and

"(3) utilization of such systems by career information delivery systems (including career counseling programs in schools).

"(c) Wherever possible, computerized data systems developed with assistance under this section shall be capable of utilizing software compatible with other systems (including management information systems and unemployment insurance and other income maintenance programs) used in the administration of employment and training programs. In developing such systems, special consideration shall be given to the advice and recommendations of the State occupational information coordinating committees (established under section 422(b) of the Carl D. Perkins Vocational Education Act), and other users of such systems for the various purposes described in subsection (b).

"(d) To carry out this section, there are authorized to be appropriated $50,000,000 for fiscal year 1988, and such sums as may be necessary for each of the succeeding fiscal years.".

(b) TECHNICAL AMENDMENT.—The table of contents of such Act is amended by adding after item "SEC. 504." the following new item:

"Sec. 505. State job bank systems.".

SEC. 272. STUDY ON PENSION PORTABILITY.

(a) STUDY.—The Secretary of Labor shall, within 6 months after the date of enactment of this Act, commence a

study of the feasibility of providing portability for pensions and health benefits for dislocated workers. Such study shall also evaluate the benefits of providing early retirement benefits without penalty for older dislocated workers. A report on the study conducted under this subsection shall be submitted to the Congress not later than 18 months after such date of enactment.

(b) AUTHORIZATION.—There are authorized to be appropriated such sums as may be necessary to carry out subsection (a).

Subtitle H—Committee on Symmetrical Access to Technological Research

SEC. 281. ESTABLISHMENT OF COMMITTEE.

(a) ESTABLISHMENT.—There is established an interagency committee to be known as the "Committee on Symmetrical Access to Technological Research" (hereafter in this section referred to as the "Committee").

(b) COMPOSITION.—

(1) The Committee shall be composed of—

(A) the Chairman of the Federal Laboratory Consortium for Technology Transfer or a delegate of the Chairman of the Federal Lab Consortium;

(B) the Secretary of Defense, or a delegate of the Secretary of Defense;

(C) the United States Trade Representative, or a delegate of the United States Trade Representative;

(D) the Secretary of State, or a delegate of the Secretary of State;

(E) the Director of the National Science Foundation, or a delegate of the Director; and

(F) The Secretary of Commerce, or a delegate of the Secretary.

(2) The Secretary of Commerce, or a delegate of the Secretary, shall be the chairman of the Committee.

(c) USE OF RESOURCES.—The Committee shall, to the maximum extent practicable, draw upon the resources of the departments and agencies represented on the Committee, as well as such other departments and agencies as it may determine to be necessary, including the United States International Trade Commission.

(d) FUNCTIONS.—The Committee shall—

(1) study the general concept of symmetrical access, which is the availability of equally valued technological knowledge and research across countries;

(2) on a country-by-country basis, construct a detailed description of the degree of symmetrical access between the United States and its major trading partners, which should take into account the fundamental

differences between countries in the types of research conducted and the sites at which research is conducted;

(3) recommend negotiating goals for the United States Trade Representative to follow in negotiations with foreign countries which are—

(A) based on the study conducted under paragraphs (1) and (2); and

(B) designed to increase and the degree of symmetrical access between the United States and foreign countries; and

(4) submit an annual report to Congress, which shall include—

(A) the description required by paragraph (2);

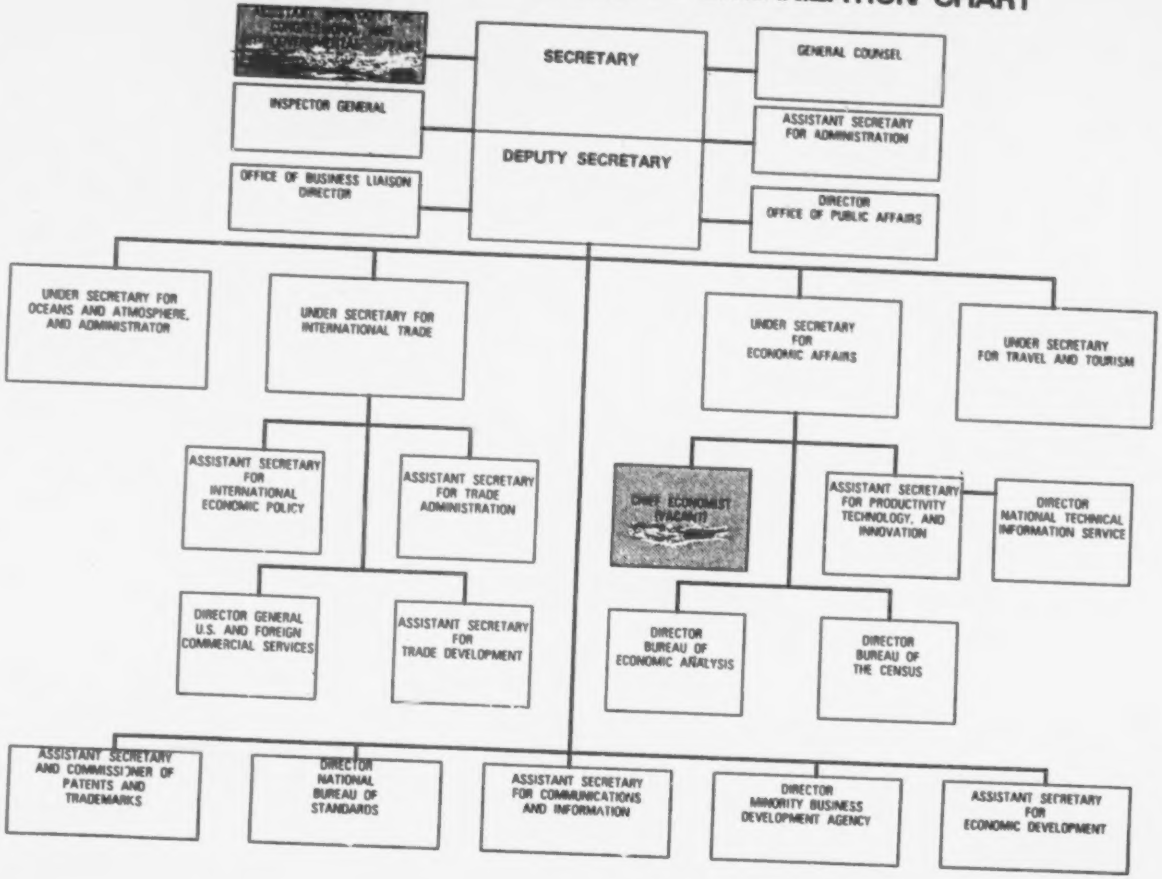
(B) recommendations for administrative or legislative changes in United States' policy that would improve symmetrical access to technological research between the United States and the foreign countries considered in the preparation of such description;

(C) an explanation of the general concept of symmetrical access employed by the Committee and suggestions as to how that concept might be refined;

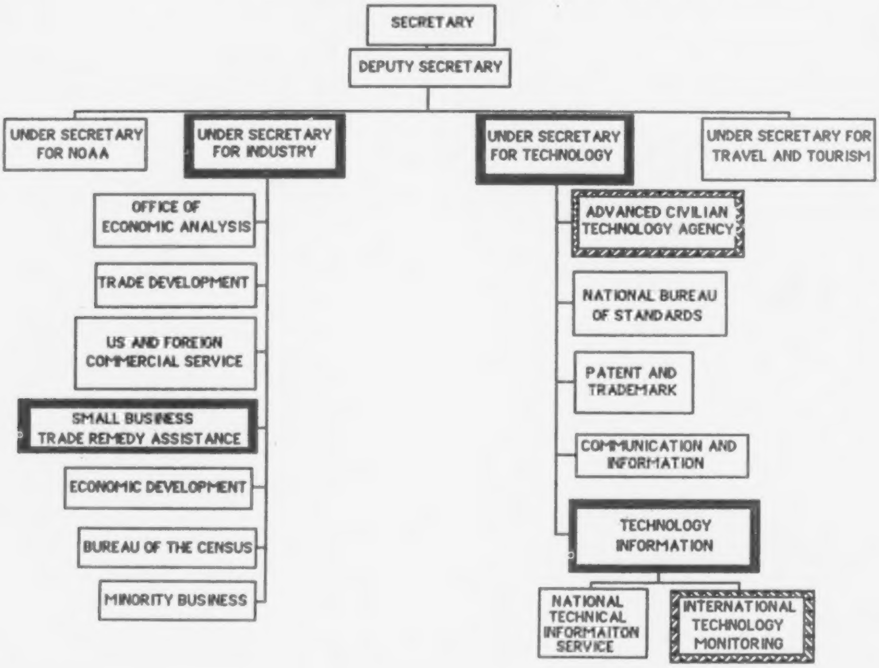
(D) a description of the negotiating goals recommended to, and adopted by, the United States Trade Representative pursuant to paragraph (3); and

(E) an assessment of the progress made by the United States Trade Representative in achieving such goals during the year with which the report is concerned.

U.S. DEPARTMENT OF COMMERCE ORGANIZATION CHART


SECRETARY
DEPUTY SECRETARY
INSPECTOR GENERAL
OFFICE OF BUSINESS LIAISON DIRECTOR
GENERAL COUNSEL
ASSISTANT SECRETARY FOR ADMINISTRATION
DIRECTOR OFFICE OF PUBLIC AFFAIRS
UNDER SECRETARY FOR OCEANS AND ATMOSPHERE, AND ADMINISTRATOR
UNDER SECRETARY FOR INTERNATIONAL TRADE
UNDER SECRETARY FOR ECONOMIC AFFAIRS
UNDER SECRETARY FOR TRAVEL AND TOURISM
ASSISTANT SECRETARY FOR INTERNATIONAL ECONOMIC POLICY
ASSISTANT SECRETARY FOR TRADE ADMINISTRATION
DIRECTOR GENERAL U.S. AND FOREIGN COMMERCIAL SERVICES
ASSISTANT SECRETARY FOR TRADE DEVELOPMENT
CHIEF ECONOMIST (VACANT)
ASSISTANT SECRETARY FOR PRODUCTIVITY TECHNOLOGY, AND INNOVATION
DIRECTOR NATIONAL TECHNICAL INFORMATION SERVICE
DIRECTOR BUREAU OF ECONOMIC ANALYSIS
DIRECTOR BUREAU OF THE CENSUS
ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND TRADEMARKS
DIRECTOR NATIONAL BUREAU OF STANDARDS
ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION
DIRECTOR MINORITY BUSINESS DEVELOPMENT AGENCY
ASSISTANT SECRETARY FOR ECONOMIC DEVELOPMENT

DEPARTMENT OF INDUSTRY AND TECHNOLOGY


SECRETARY
DEPUTY SECRETARY
UNDER SECRETARY FOR NOAA
UNDER SECRETARY FOR INDUSTRY
UNDER SECRETARY FOR TECHNOLOGY
UNDER SECRETARY FOR TRAVEL AND TOURISM
OFFICE OF ECONOMIC ANALYSIS
TRADE DEVELOPMENT
US AND FOREIGN COMMERCIAL SERVICE
SMALL BUSINESS TRADE REMEDY ASSISTANCE
ECONOMIC DEVELOPMENT
BUREAU OF THE CENSUS
MINORITY BUSINESS
ADVANCED CIVILIAN TECHNOLOGY AGENCY
NATIONAL BUREAU OF STANDARDS
PATENT AND TRADEMARK
COMMUNICATION AND INFORMATION
TECHNOLOGY INFORMATION
NATIONAL TECHNICAL INFORMAITON SERVICE
INTERNATIONAL TECHNOLOGY MONITORING

KEY

■ New office within Department created by combining existing offices

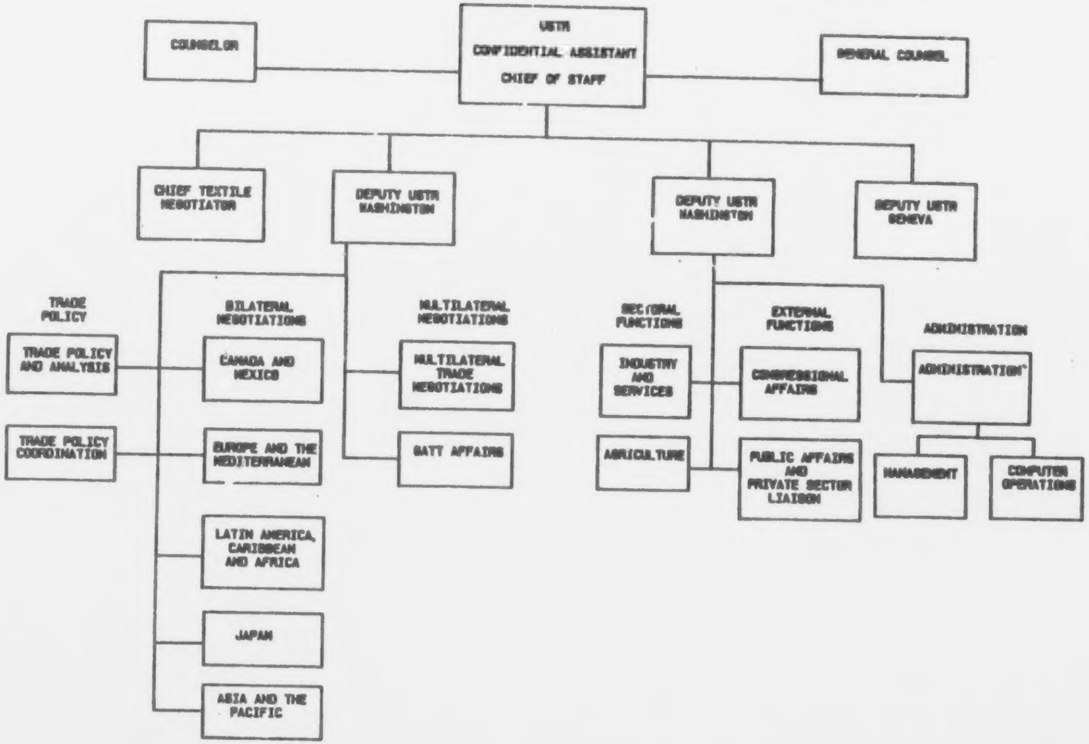
▨ Newly created Agency

■ New office within Department

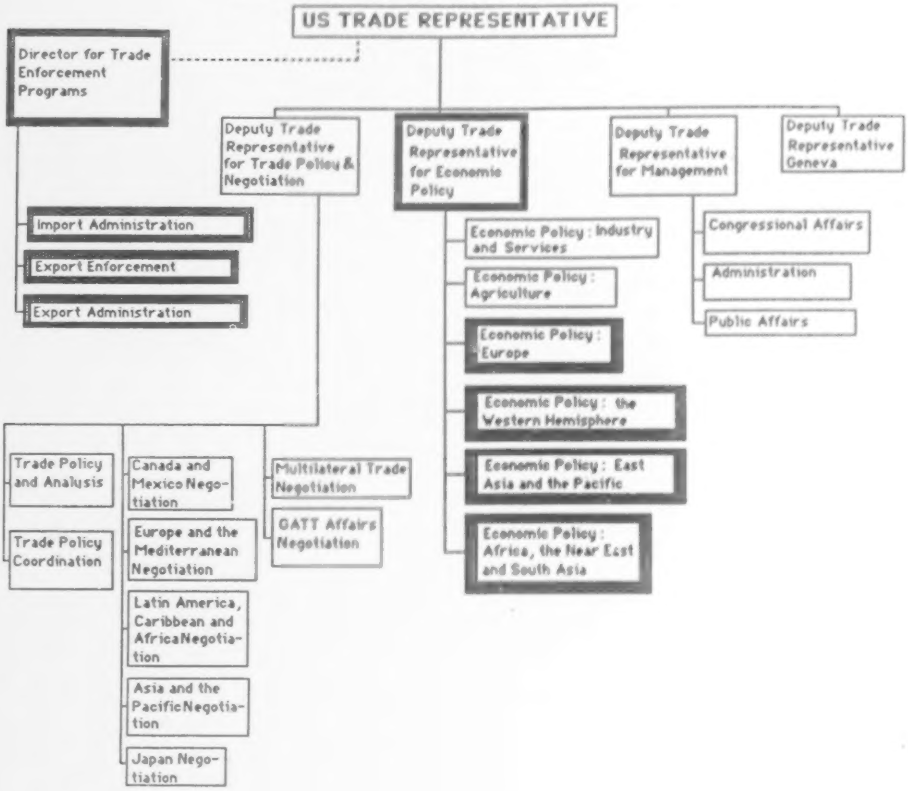
■ New office transferred from other Agency

NOTE: The following offices are part of the Department but are not shown on the chart: (i) Assistant Secretary for Congressional and Intergovernmental Affairs; (ii) Inspector General; (iii) Office of Business Liason; (iv) General Counsel; (v) Assistant Secretary for Administration; and (vi) Office of Public Affairs.

THE OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE


USTR
CONFIDENTIAL ASSISTANT
CHIEF OF STAFF
COUNSELOR
GENERAL COUNSEL
CHIEF TEXTILE NEGOTIATOR
DEPUTY USTR WASHINGTON
DEPUTY USTR WASHINGTON
DEPUTY USTR GENEVA
TRADE POLICY
TRADE POLICY AND ANALYSIS
TRADE POLICY COORDINATION
BILATERAL NEGOTIATIONS
CANADA AND MEXICO
EUROPE AND THE MEDITERRANEAN
LATIN AMERICA, CARIBBEAN AND AFRICA
JAPAN
ASIA AND THE PACIFIC
MULTILATERAL NEGOTIATIONS
MULTILATERAL TRADE NEGOTIATIONS
GATT AFFAIRS
SECTORAL FUNCTIONS
INDUSTRY AND SERVICES
AGRICULTURE
EXTERNAL FUNCTIONS
CONGRESSIONAL AFFAIRS
PUBLIC AFFAIRS AND PRIVATE SECTOR LIAISON
ADMINISTRATION
ADMINISTRATION*
MANAGEMENT
COMPUTER OPERATIONS

UNITED STATES TRADE ADMINISTRATION


US TRADE REPRESENTATIVE
Director for Trade Enforcement Programs
Import Administration
Export Enforcement
Export Administration
Deputy Trade Representative for Trade Policy & Negotiation
Deputy Trade Representative for Economic Policy
Deputy Trade Representative for Management
Deputy Trade Representative Geneva
Economic Policy: Industry and Services
Economic Policy: Agriculture
Economic Policy: Europe
Economic Policy: the Western Hemisphere
Economic Policy: East Asia and the Pacific
Economic Policy: Africa, the Near East and South Asia
Congressional Affairs
Administration
Public Affairs
Trade Policy and Analysis
Trade Policy Coordination
Canada and Mexico Negotiation
Europe and the Mediterranean Negotiation
Latin America, Caribbean and Africa Negotiation
Asia and the Pacific Negotiation
Japan Negotiation
Multilateral Trade Negotiation
GATT Affairs Negotiation

KEY

▨ Transfer from former Commerce Department

NOTE
The following offices are part of the U.S. Trade Administration but are not shown on the chart: (i) Chief Textile Negotiator; (ii) General Counsel; and (iii) Counselor.

STATEMENT OF WILLIAM LILLEY III
PRESIDENT, AMERICAN BUSINESS CONFERENCE
BEFORE THE COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

JUNE 8, 1987

Mr. Chairman and members of the Committee, I appreciate the opportunity to offer testimony this afternoon regarding S. 1233, "The Economic Competitiveness, International Trade, and Technology Development Act of 1987."

I appear today on behalf of the members of the American Business Conference (ABC). The American Business Conference comprises one hundred chief executives of midsize, high growth American companies drawn from the manufacturing, high tech, service, and financial sectors. ABC firms enjoy an average annual growth in revenues of 21%. The majority compete internationally. Between 1981 and 1985, the average annual growth rate of international sales of ABC firms was 27%. Between 1985 and 1986 alone, international sales grew at an average rate of 47%. I have included with my testimony a report, "The Challenge of Global Competitiveness: Views of America's High Growth Companies" which documents at length the tactics and strategies ABC companies employ for winning in the world marketplace.

Before turning to S. 1233, let me state briefly the perspective of ABC executives toward the current national dialogue on trade policy. ABC executives take it as axiomatic that the answer to our trade dilemma is export expansion. That proposition obviously implies a more internationally competitive American economy. Our members do not believe that increased competitiveness can be mandated by governmental fiat. They regard much of the current debate on trade legislation as counterproductive because it seems to them tinctured by protectionist impulses antithetical to export growth. ABC executives place the preponderant responsibility for enhancing our nation's international competitiveness upon American management which, in creative cooperation with labor, can do more to expand exports than any initiative of government.

This is not to argue that government lacks a legitimate role in improving our trade posture. What government can do -- what government must do -- is create an economic and regulatory environment in which managerial expertise can flourish. Primarily this means putting our fiscal house in order. It also means assuring that the administrative and regulatory structure of government is dedicated, to the maximum extent possible, to the encouragement of export expansion and the commercial development and exploitation of new technologies.

S. 1233 attempts to address the latter imperative. If enacted, it would combine the trade policy and negotiating functions of the Office of the United States Trade Representative (USTR) with the trade implementation and information functions now contained within the Department of Commerce. The new entity would be called the United States Trade Administration and would be lodged within the Executive Office of the President. The Commerce Department would itself be reorganized into a Department of Industry and Technology and would include a new office, the Advanced Civilian Technology Agency (ACTA). ACTA would, through various assistance programs, help industry better to identify and adapt new technologies for commercial ends.

As this brief summary suggests, S. 1233 proposes that Congress move the government's trade and business promotion apparatus a considerable distance. Before embarking, legislators might well ask the time-honored question of foot soldiers everywhere: "Is this trip necessary?" On balance, ABC executives think that it is. We consequently support the thrust of S. 1233.

United States Trade Administration (USTA)

Consolidation of the trade-related responsibilities of the Department of Commerce and those of the USTR within a new United States Trade Administration would be desirable for several reasons.

First, consolidation would presumably eliminate the current illogical separation of trade policy-making from trade policy implementation. Functional reorganization will not, of course, abolish bureaucratic snarls but, from the perspective of business people who spend more time scouting foreign markets than prowling Washington corridors, it should make matters incrementally more efficient and comprehensible.

Second, ABC executives hope that creation of USTA would elevate the importance of international trade as a national economic priority.

Consolidation would serve to curtail the perceived diffusion of responsibility for trade issues within the government as a whole. Obviously a number of departments and offices will always exert some authority over aspects of trade. But the establishment of a single trade administration should bring a degree of organizational accountability and heightened visibility to the making and implementation of trade policies.

Third, the USTA, as envisioned in S. 1233, would have sufficient "critical mass" and authority to carry on the protracted task of bilateral and, especially, multilateral trade negotiations. ABC members view international negotiations as the single most constructive approach to rectifying inequities in the current trading system. They believe that the government requires an institution of sufficient weight and expertise to follow through on trade talks spanning a number of years and, perforce, a number of shifts in the domestic political tide.

Department of Industry and Technology

In relieving the Department of Commerce of most of its direct international trade responsibilities, S. 1233 proposes to reorient the Department toward competitiveness issues applying alike to domestic and international businesses. The new Department of Industry and Technology would have an Undersecretary of Industry overseeing most of the Commerce Department's current informational, economic, and business development responsibilities. S. 1233 would also create a new Undersecretary for Technology who would manage Commerce's current intellectual property, technical information, and testing functions as well as a new office, the Advanced Civilian Technology Agency (ACTA). ACTA would provide support in the form of matching grants and cooperative agreements to research organizations and consortia for the development and application of new technologies not otherwise exploited within the private sector.

ABC believes that this suggested reorganization makes conceptual and functional sense. I am particularly pleased to see that, among other duties, S. 1233 assigns to the Secretary of the Department of Industry and Technology principal responsibility for advising the President in identifying and assessing the consequences of any government policies which adversely affect, or have the potential to adversely affect, the competitiveness of United States industries and services. This responsibility, similar to one assigned to the Council on Wage and Price Stability in the 1970's regarding assessment of the inflationary impact of government policies, has long been championed by ABC as a necessary precursor to making government more oriented to exports.

Also intriguing to our members is the proposed creation of ACTA. In part, this is due to the nature of ABC companies. Probably more than most firms, ABC companies rely in one way or another from advances in technology. For most, research and development is crucial to maintaining and increasing market share at home and abroad. This is borne out in the growing investment our companies make in R & D. Between 1985 and 1986, for example, ABC firms increased their research and development expenditures at an average rate of 30%.

Yet our members cannot undertake all the research and development projects of importance to them. Current tax and accounting policies disproportionately penalize investments in research and development, a penalty apparent on profit and loss sheets and therefore apparent to America's notoriously impatient capital markets. Further, some research and development projects are on their face too expensive, too speculative, or too large to warrant their pursuit by midsize companies.

Establishment of an Advanced Civilian Technology Agency cannot -- and does not purport to -- supplant tax and accounting reform or underwrite all research and development projects. But it at least offers the promise of a national effort to promote the capturing of advanced technology for commercial purposes. Few issues are of greater urgency to America's competitiveness or, more specifically, to the continued health of this nation's value-added manufacturing and service companies. On that account S. 1233 quite properly stipulates that ACTA's Board will include representatives of midsize and small business.

I would like to conclude with two final points. First, it is a truism that any reorganization, however desirable, can only yield improvement if the people involved are properly motivated to do their best. In particular that means insuring that those endowed with overall responsibility are competent and have the support of both the President and Congress. Managerial will and skill are as important in government as in business; without them, reorganization devolves into mere bureaucratic chess.

Second, Mr. Chairman, I note that some observers have criticized S. 1233 as precipitate legislation. At a time when some in Congress -- and in the private sector -- seek passage of a trade bill containing some of the most radically protectionist proposals in our history, the notion that S. 1233 does not deserve serious consideration and debate mystifies ABC members. We see the bill as part of a nearly decade-long, bipartisan legislative and regulatory process that has sought to rationalize the government's various trade functions. Senator Roth has provided much of the leadership for this effort. Four years ago, for example, ABC warmly supported both Senator Roth's and Secretary of Commerce Baldrige's plans for trade reorganization, plans in many respects similar to the one outlined in the legislation you are considering today. It is quite unimportant to us who receives credit for trade reorganization; the important thing is to get the job done.

At the same time I want to make my organization's position clear. As much as ABC would like to see reorganization effected, if S. 1233 is tied to an omnibus bill that contains protectionist measures, we shall not be able to support it. The enhancement of exports and the nurturing of competitiveness we see as incompatible with protectionism. We congratulate this Committee for its long-standing commitment to building an internationally competitive America and we look forward to working with you in developing trade legislation designed to encourage business success rather than simply protect failure.

THE CHALLENGE OF GLOBAL COMPETITIVENESS:

Views of America's High Growth Companies

American Business Conference

PREFACE

In late autumn 1986, the American Business Conference (ABC) asked its members, the chief executives of one hundred midsize, high growth companies, to complete a survey on international competitiveness. ABC executives supplied detailed information on their companies' international performance and on their own strategies and tactics for competing in the international marketplace. Supplementary interviews were also conducted with some ABC members. This report summarizes the results of the survey and the interviews.

The survey findings reveal an astonishing record of success. Those ABC companies competing in international markets—the great majority of all ABC firms—are achieving rates of growth in international revenues often comparable to the double digit annual growth rates they enjoy in their domestic markets. This success is not restricted to any single industry. Membership in ABC is drawn from the manufacturing, service, and high technology sectors. In each sector we found evidence that American business can meet the challenge of international competition.

Encouraging as they are, the results of the survey should not be misconstrued. ABC executives are fully aware of the fragility of their international success. None are complacent about maintaining that success. Nor do they believe that their example yields easy, readily transferable lessons for industries suffering decline and job losses. If this survey is used to camouflage the grave economic problems confronting the United States, problems of which the lack of competitiveness is both a symptom and a cause, it will prove to be a counterproductive exercise.

ABC executives seek to enrich, not curtail, the current public debate on competitiveness. By offering their experience and insight, they hope to contribute to the reorientation of the policies of business and government in a direction that rewards and encourages success rather than simply protects failure. Fundamentally, America's ability to compete is an issue of economic growth and on that issue few can speak with greater practical experience than ABC members.

This report is the first in a projected series of ABC publications on aspects of the competitiveness problem. This project would not be possible without the support, interest, and cooperation of the ABC membership. In particular, we would like to recognize the work of ABC's Research and Planning Committee and its co-chairmen, Stephen Levy, Chairman and Chief Executive Officer, Bolt Beranek and Newman, Inc. and Earle Williams, President and Chief Executive Officer of BDM International, Inc.

We would also like to thank Dr. George Hatsopoulos, Chairman and President of Thermo Electron Corporation, for his continuing generosity in sharing his economic analysis of the underlying roots of the competitiveness dilemma.

Arthur Levitt, Jr., Chairman
William Lilley III, President

The American Business Conference

New York and Washington, February 1987

TABLE OF CONTENTS

I. Findings 1

II. Background on International Competitiveness 3

III. Discussion of the ABC Survey 7
  A. ABC Companies are Internationally Competitive 7
  B. Terms of Competition 11
  C. Forms of Competition 15
  D. Trade Barriers 19
    1. Explanation of foreign trade barriers 19
    2. Export licensing 21
    3. The special case of Japan 21

IV. Final Points 25

Appendices 27
  A. ABC Competitiveness Survey 27
  B. ABC Membership 29

“The efforts in board rooms and plants throughout the country should be toward making the best products at the lowest price so that—given a choice—consumers here and elsewhere will choose to buy them. And the efforts in Washington should be channeled toward supporting that competitive spirit, rather than trying to kid anyone into thinking that Uncle Sam can make the rest of the world go away.”

Chicago Tribune
December 28, 1986

“Trade restrictions are growth restrictions. At a time when industrialized and developing countries alike need faster growth, the industrial powers are leading in the wrong direction. The only way to win at Trade War is not with more war but with Trade Peace.”

The New York Times
January 3, 1987

“The world can hardly afford new protectionist curbs on the huge American market for foreign products. Trade expansion is vital. It creates jobs, economic growth and thus bigger markets for all countries' exports.”

The New York Times
December 8, 1986

“American performance in manufacturing is going to set the country's standard of living, as it struggles out of its gigantic trade deficit. There are only two ways to bring the trade deficit down. Either increasingly competitive American exports rise to balance the present volume of imports. Or imports will fall to meet exports, which means reduced consumption.

If American exports are going to rise to support present living standards, most of that improvement is going to have to come in the broad category of manufactured goods.”

The Washington Post
December 3, 1986

I.
FINDINGS

- ABC companies regard global competitiveness as their most important business opportunity as well as their greatest business challenge.

- ABC companies, representing all sectors of the economy, are meeting the challenge of international competition.

- ABC companies compete against their international rivals primarily on quality, value, innovation, service, and marketing.

- ABC executives believe that international competitiveness is largely a question of managerial will and skill.

- ABC executives also believe that government must supply the appropriate environment in which managerial will and skill can flourish. To that end, government must address the related problems of high capital costs and low national savings caused by large federal deficits and economic policies that reward consumption over savings.

- ABC executives identified a number of barriers to free and fair trade. Where appropriate these barriers must be challenged by government initiative. ABC executives believe that current trade law, streamlined and vigorously enforced, is sufficient. They are opposed to protectionist trade legislation.

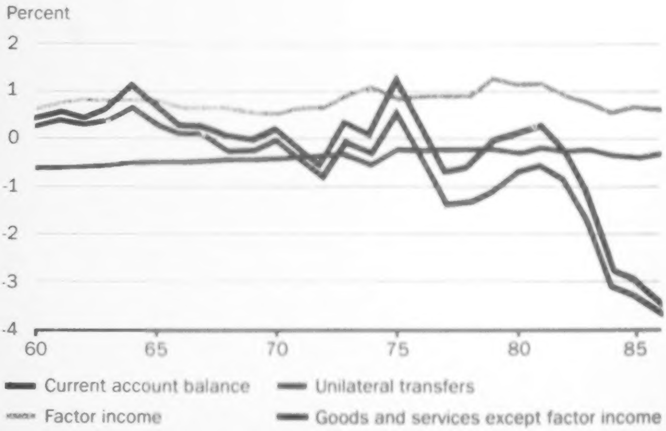
“To raise productivity and gain real competitiveness a country must eschew protection but it also must go beyond this and learn to compete in foreign countries. . . . If foreign firms invade the American market but American firms do not invade foreign markets, foreign firms will use their secure home markets as bases from which they can pick off American firms in the American market. . . . In the world economy ahead of America, a firm that cannot compete successfully in foreign markets will not survive in the American market.”

Lester C. Thurow
The Zero Sum Solution
Simon & Schuster, 1985

“When we are importing almost 70 percent more than we are exporting, and when the Federal Government is spending 25 percent more than its revenues, it doesn't take sophisticated economic analysis to suggest something is out of kilter. . . . To put it another way, investment has not been increasing, we are saving less and relying more on borrowing abroad, and the great growth industry (apart from Wall Street) has been importing. If all that sounds as though we are living beyond our means, well that's my conclusion, too.”

Paul A. Volcker
November 15, 1986

Components of Current Account Balance
Percent of GDP



Graph courtesy of Dr. George Hatsopoulos

II.

BACKGROUND ON INTERNATIONAL COMPETITIVENESS

The international competitiveness of the United States is not an isolated question of the relative efficiency with which American business produces and markets goods and services. Global competitiveness presupposes appropriate government macroeconomic policies, an effective educational system, a constructive relationship between labor and management, and a willingness on the part of Americans to defer a portion of their current consumption in favor of investment in the nation's future. The ability to compete internationally, while primarily a business problem, is at the same time a legitimate measure of the health of society as a whole.

A commission appointed by President Ronald Reagan to study competitiveness developed a definition of competitiveness that suggests its importance for all Americans.

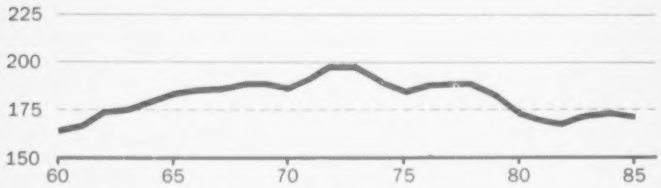
> Competitiveness is the degree to which a nation can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real incomes of its citizens.—*The Report of the President's Commission on Competitiveness* (the "Young Commission") 1985.

As this definition indicates, America cannot be considered competitive unless certain economic ends are served.

- A competitive America requires a globally competitive manufacturing sector as well as a globally competitive service sector.

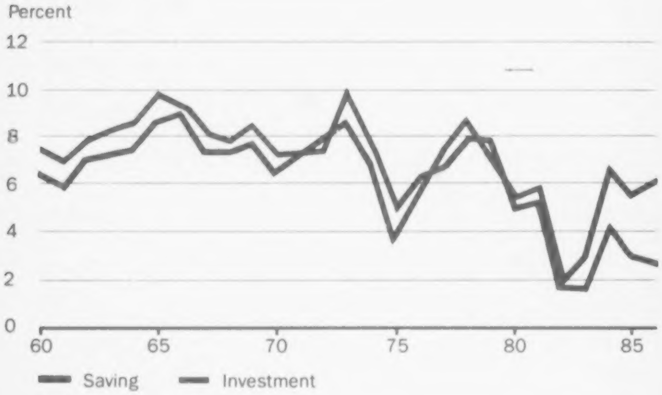
- A competitive America provides an adequate standard of living for its citizens and the prospect for future improvement of that standard.

Real Average Weekly Earnings
In 1977 Dollars



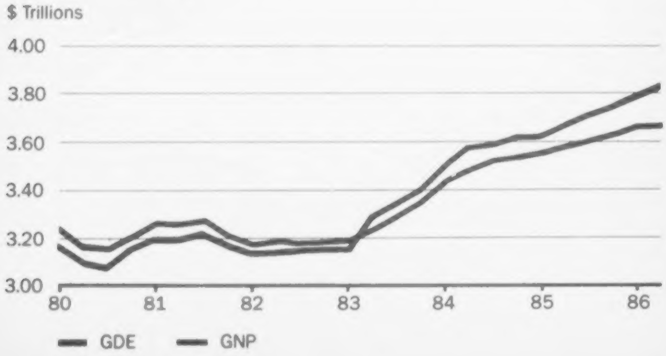
Department of Labor (Bureau of Labor Statistics)

Net National Saving and Net Investment
Percent of GDP



Dr. George Hatsopoulos

Gross National Product Vs. Gross Domestic Expenditures
In Constant 1982 Dollars



Dr. George Hatsopoulos

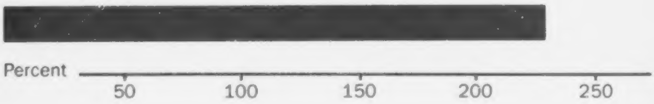
- A competitive America is fueled by increased earnings, not greater indebtedness.
- A competitive America, in short, promotes economic growth, the benefits of which must be accessible to those citizens and firms willing to work for success.

Judged by these standards, the United States is not competitive.

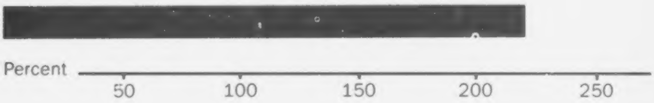
- The performance of American goods in world trade has been rapidly eroding leading to a large imbalance in American trade accounts.
- Real income per hour in the private sector has been stagnant for the past fifteen years.
- The national savings rate has proven inadequate to fund the nation's desire to consume and its need to invest.
- Business decline, income stagnation, and the inadequate savings rate have led to a widening gap between what our nation spends and what it produces.
- To close the gap and maintain the standard of living, government, business, and individual Americans have increased their indebtedness.
- Much of our borrowings flow from abroad. Foreign indebtedness stands at nearly 3.5 percent of GNP. The United States is the largest debtor on earth.

Existing debt must be serviced and ultimately reduced. To do so without a collapse in the standard of living, American business-and, in particular, the manufacturing sector, must improve its competitive position relative to our trading partners.

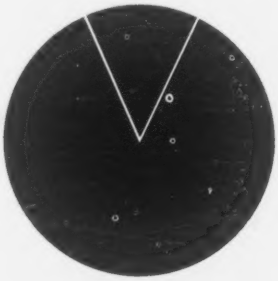
Growth of International Revenues of ABC Companies, 1980-1985



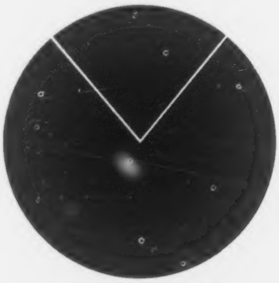
Estimated Growth of International Revenues of ABC Companies, 1986-1990



Total Revenues of ABC Companies Derived Internationally, 1982



Total Revenues of ABC Companies Derived Internationally, 1985



III.
DISCUSSION OF THE ABC SURVEY

A. ABC Companies are Internationally Competitive

Contrary to prevailing trends throughout much of American business, the ABC executives surveyed for this report have led their companies to considerable international success.

Between 1980 and 1985, ABC firms achieved an average annual growth rate in international sales of over 27 percent. For the five year period 1986-1990, ABC executives project a slightly smaller but still robust growth in international sales of over 26 percent per year.

These growth rates underscore the significance of foreign revenues as a fuel for the overall expansion of ABC firms. A 1982 McKinsey and Company survey revealed that, on average, 13.6 percent of the total revenues of ABC firms was derived internationally. Three years later, in 1985, that figure had risen to 22.1 percent. Clearly, the penetration of foreign markets has become, and will continue to be, crucial to the high growth strategies of ABC executives.

Together with the direct benefits of competing internationally, ABC executives report that participation in international markets reinforces their position at home. By seizing business from a foreign competitor in the latter's market or in third countries, ABC executives believe they can better protect their market share in the United States. Some have also found that direct exposure to foreign technologies and marketing techniques has sharpened their own already highly developed innovative and marketing skills. And, insofar as they supply other American companies with goods or services, ABC executives profit from the expansion of those companies into overseas markets.

The importance of international competitiveness

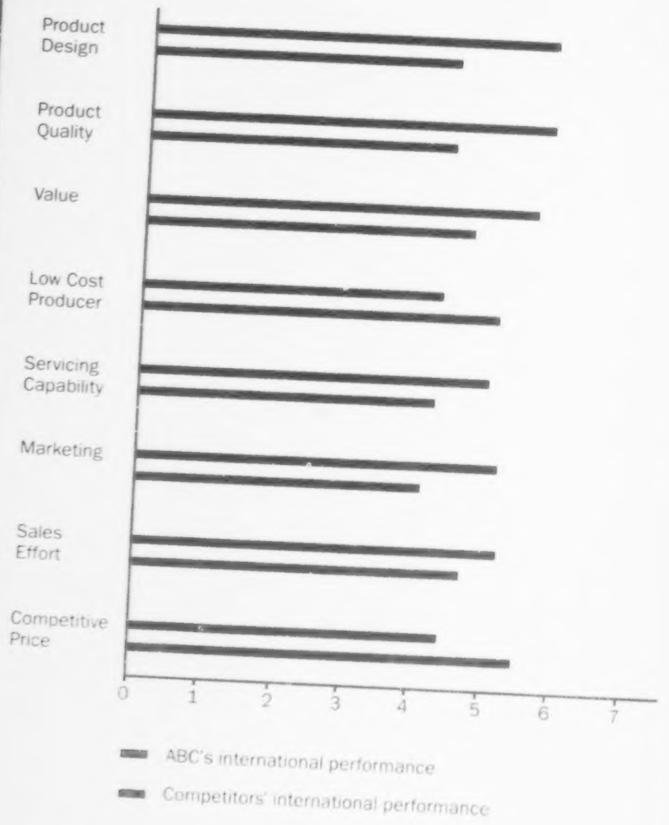
"All of our markets are worldwide—therefore our competitors are worldwide. This issue is of major strategic importance to us."
Roger Johnson, Chairman, President & C.E.O.
Western Digital Corporation

"International competition is very important as a source of revenues, diversification, and exposure to foreign technology/competition."
Charles Denny, Chairman & C.E.O.
ADC Telecommunications

"Maintenance of our successful domestic markets requires a fully-integrated and successful international presence in order to capture product innovations from abroad."
J.P. Barger, President & C.E.O.
Dynatech Corporation

"Our international competitiveness reflects our ability to attract the best people for our overseas operations and provide leadership as an industry role model."
Patrick McGovern, Chairman
International Data Group

How ABC Companies Rate Themselves Against Their Competitors



III.

B. Terms of Competition

Abraham Krasnoff, Vice Chairman and C.E.O. of the Pall Corporation, a New York-based manufacturer of filtration systems, summarized his firm's strategy for competing internationally. "Our goal is to be the low cost producer of specialty products—products with such high value that they warrant a high price. We do not sell commodities."

Allowing for differences in the products or services they sell, the great majority of ABC companies follow a similar path. A commitment to quality, to value, to innovation, and to service on the one hand, and the ability to identify—or even create—markets on the other, distinguish ABC executives.

To these qualities ABC executives bring an attitude of relentless optimism. That optimism, which is a product of self-confidence, allows them to take business risks. It grants them patience to sustain early losses in order to establish a presence in new markets. It gives them and their companies a sense of purpose. Optimism, as much as any single personal characteristic, is the catalyst for their success.

Comments regarding competitive strategies

"We compete by promoting value-added products, niche marketing, better product performance, more product variety, and by using entrepreneurial salesmen."
Roland Boreham, Chairman & C.E.O.
Baldor Electric Company

"We generally sell our products on technical merits, and on a 'total service' approach not offered by other vendors."
Stephen R. Levy, Chairman & C.E.O.
Bolt Beranek and Newman Inc.

"We distinguish our products with image-building advertising and quality workmanship/design."
W. L. Lyons Brown, Jr., Chairman & C.E.O.
Brown-Forman Corporation

"We invented both our technology and our markets."
Robert Krieble, Chairman (ret.)
Loctite Corporation

"We emphasize client service."
Larry Horner, Chairman & C.E.O.
Peat, Marwick, Mitchell & Company

"We compete internationally in the same way as we do in the United States: quality, price, and service."
T. J. Dermot Dunphy, President & C.E.O.
Sealed Air Corporation

"Technological improvements have been the critical determinant of our international sales. To overcome domestic competitors and other exporters, we have found that, in general, we must offer superior performance and value. We have also learned that exceptional reliability and long operating lives are even more important in international markets because customers are concerned with how far away they are from our production facilities. Finally, effective cost-control has proven to be very important."
George Hatsopoulos, Chairman & President
Thermo Electron Corporation

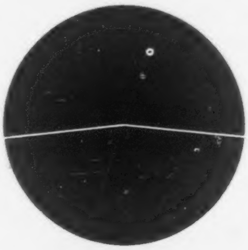
"We compete by offering/emphasizing U.S. technology as the best in the world."
Earle Williams, President & C.E.O.
BDM International, Inc.

"We attack foreign competitors on their own home ground by doing the job better in all aspects."
Abraham Krasnoff, Vice Chairman & C.E.O.
Pall Corporation

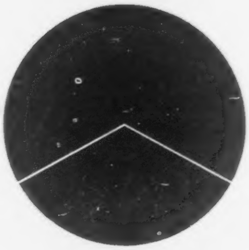
International Competitiveness: Other Business Views

Findings from a 1986 survey by Egon Zehnder International of one hundred executives from the nation's *largest* industrial and service firms:

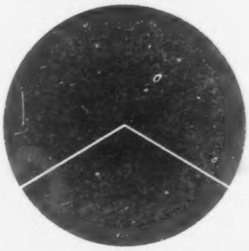
Believe foreign markets are more open than their companies assume



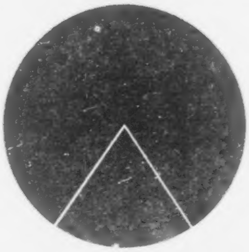
Think their colleagues are "woefully ignorant" about foreign markets



Cite management's lack of initiative as greatest barrier to overseas expansion



Oppose import quotas as way to reduce world competitive pressures on their companies



III.

C. Forms of Competition

While the terms on which ABC companies compete internationally are fixed—quality, service, innovation, and superior marketing—the form or manner in which they compete is not. Agility is the only constant denominator in the approach ABC companies adopt toward entering a foreign market. As Roland Boreham, Chairman & C.E.O. of Baldor Electric Company has said, American companies seeking to compete internationally cannot adopt a single set of tactics—they must be prepared to use "anything that works."

Nonetheless, the survey of ABC executives did reveal certain attitudes and considerations that typically influence the manner in which they compete abroad. For example, ABC executives are averse to sharing the risks or rewards of international competition. Eighty-two percent said they prefer to enter foreign markets unilaterally rather than pursue cooperative arrangements with indigenous firms. When they do undertake joint ventures, partnerships, or licensing arrangements, it is often because tariffs or non-tariff barriers such as technology transfer requirements preclude direct, economical access to target markets.

Although wary of cooperative arrangements with foreign firms, most ABC executives endorse the use of foreign nationals in positions of responsibility. The accounting firm of Arthur Andersen and Company, for example, has tapped the "huge opportunities" its senior partner, Robert Philip, sees in international markets by establishing separate operating units in over forty countries managed exclusively by local personnel trained by the company.

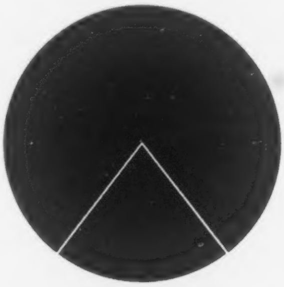
Other ABC executives report that a foreign sales force helps them to identify business opportunities, ease cross-cultural communication, and improve marketing strategies. ABC executives with manufacturing facilities overseas also benefit from foreign management. According to John Gilmartin, President & C.E.O. of Millipore, the harshest critics of his company's products are the managers of his Japanese plant.

International Competitiveness: Other Business Views

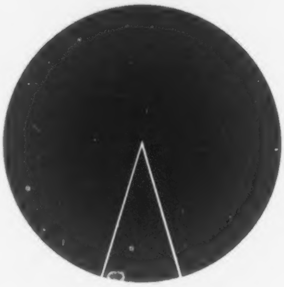
Findings from a 1986 survey by the Bank of Boston of representatives of *small* business:

- Small business executives believe that product quality and aggressive marketing are chief prerequisites to successful exporting strategy.
- Small business executives primarily blame adverse macroeconomic conditions, particularly an unfavorable exchange rate, for reductions in American exports.

Oppose quota and tariff restrictions on foreign imports



Favor pursuit of multilateral trade negotiations



For them, production of an absolutely superior product is a matter of personal honor.

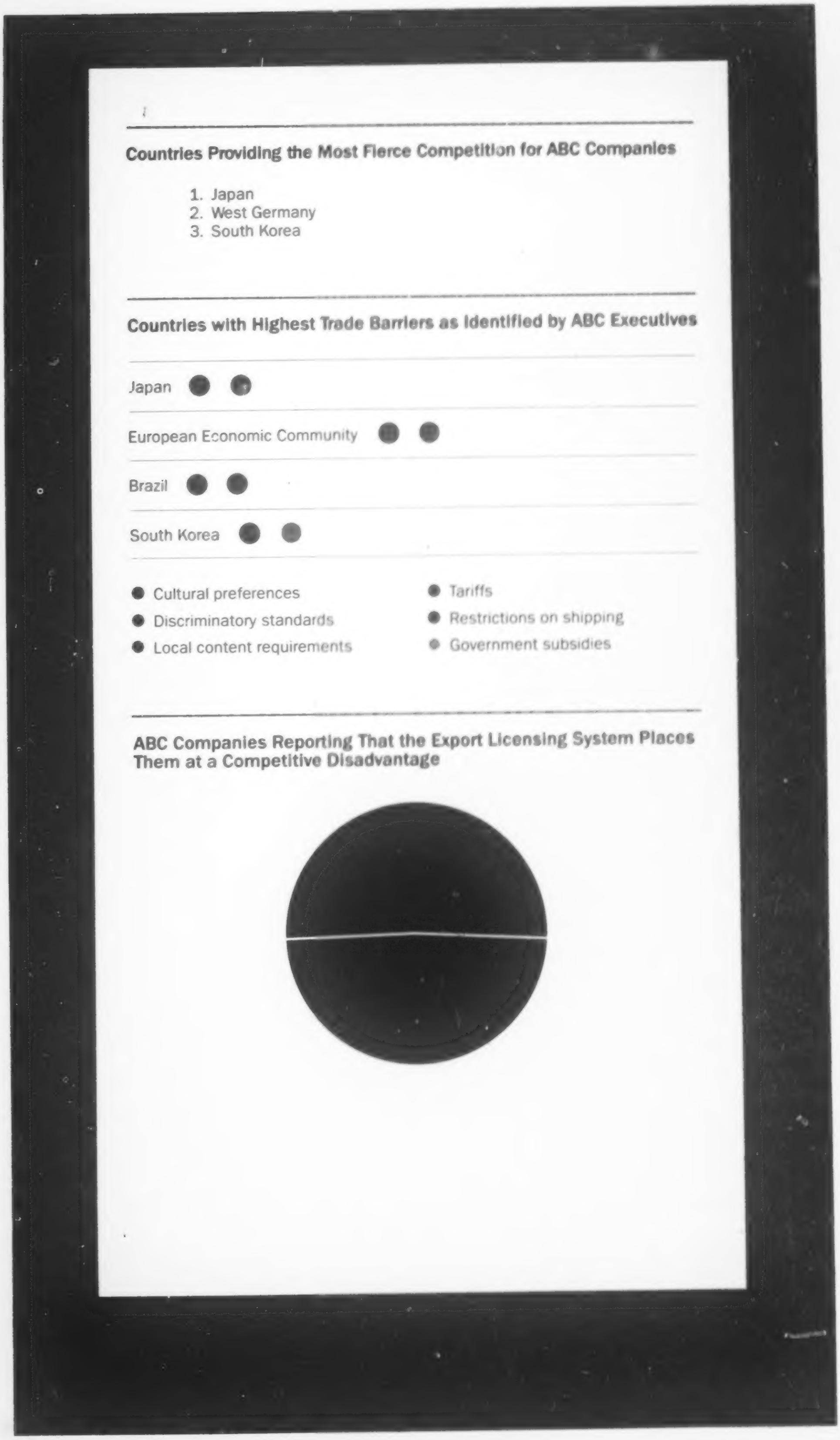
ABC executives were asked whether they had moved manufacturing facilities offshore to reduce costs within the last five years. Forty-seven percent answered affirmatively. Ireland, Mexico, Puerto Rico, and Taiwan were the most commonly named sites for new plants.

Roger Johnson, Chairman of Western Digital Corporation, offered a suggestive perspective on his decision to locate facilities in Cork, Ireland. Labor and resource costs had minor relevance. Johnson stresses instead the importance of controlling *total* costs. The main components of Western Digital's total costs are, in descending order of importance:

1. cost of market access
2. cost of capital/taxes
3. cost of customer support
4. cost of labor/manufacturing

Johnson argues that for many high growth companies the first two costs typically dictate the location of new manufacturing facilities. Unless those costs are favorable, American labor could offer its services for free and Western Digital would still move offshore. With a favorable tax rate and a net cost of capital of 3 percent in Ireland, it would be bad business not to relocate.

Roger Johnson doubts that policy makers understand these new business realities. As he sees it, the competitiveness debate in Washington assumes a manufacturing sector that is largely labor intensive. Today, competitive manufacturing depends instead upon the skillful use of capital to acquire appropriate technologies and to train employees to put those technologies to use. Accordingly, to maintain the nation's manufacturing base, government must promote economic policies that yield a favorable cost of capital, a competitive and stable rate of monetary exchange, and a tax system that encourages savings and investment.



Countries Providing the Most Fierce Competition for ABC Companies

1. Japan
2. West Germany
3. South Korea

Countries with Highest Trade Barriers as Identified by ABC Executives

Japan ● ●

European Economic Community ● ●

Brazil ● ●

South Korea ● ●

- ● Cultural preferences
- ● Discriminatory standards
- ● Local content requirements
- ● Tariffs
- ● Restrictions on shipping
- ● Government subsidies

ABC Companies Reporting That the Export Licensing System Places Them at a Competitive Disadvantage

III.

D. Trade Barriers

ABC executives identified a variety of tariff and non-tariff trade barriers that impede their ability to enter foreign markets. Some of these barriers can and should be lowered through governmental action. ABC executives believe that current trade laws, vigorously applied, are sufficient for the task. They oppose protectionist legislation.

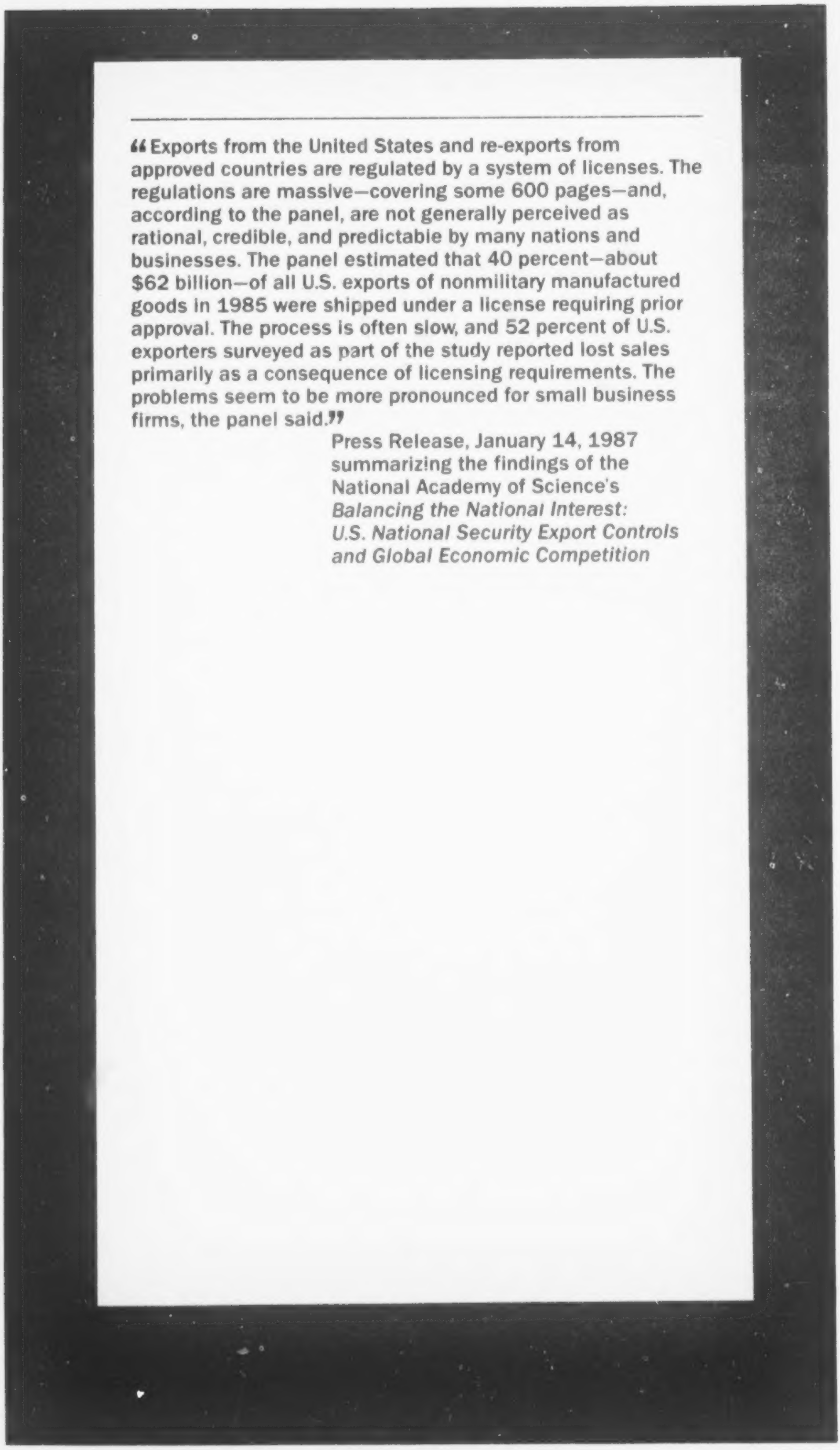
1. Explanation of foreign trade barriers

Cultural preferences were the most common foreign barrier to trade identified by ABC executives. Under this category are grouped a number of manifestations of cultural chauvinism. These include the reluctance of talented foreign technicians and sales people to join American-owned subsidiaries, the tendency of governments to rely upon local suppliers, and the unwillingness of consumers—both individuals and firms—to buy American products and services. Japan and the members of the European Economic Community (EEC) were the countries most often associated with the cultural preferences barrier. ABC executives specifically singled out the EEC for domestic content requirements.

Tariffs constituted the second most commonly cited trade barrier. Brazil is particularly notorious for its prohibitively high tariffs. ABC executives also fault Korea and Japan on this score.

Discriminatory regulatory standards, a problem associated almost exclusively with Japan, was the third most commonly cited trade barrier. This category encompasses a variety of unpredictable, prejudicial, or unevenly applied regulatory policies. One example offered by an ABC executive is Japan's lengthy patent process. It effectively blocks the introduction of innovative products until local firms have had time to catch up. Other executives cited instances in which their products were rejected by Japanese authorities for seemingly irrelevant reasons such as "improper" packaging.

Additional foreign trade barriers identified by ABC



> “Exports from the United States and re-exports from approved countries are regulated by a system of licenses. The regulations are massive—covering some 600 pages—and, according to the panel, are not generally perceived as rational, credible, and predictable by many nations and businesses. The panel estimated that 40 percent—about $62 billion—of all U.S. exports of nonmilitary manufactured goods in 1985 were shipped under a license requiring prior approval. The process is often slow, and 52 percent of U.S. exporters surveyed as part of the study reported lost sales primarily as a consequence of licensing requirements. The problems seem to be more pronounced for small business firms, the panel said.”

Press Release, January 14, 1987
summarizing the findings of the
National Academy of Science's
Balancing the National Interest:
U.S. National Security Export Controls
and Global Economic Competition

executives include: data flow restrictions, discriminatory tax policies, prohibitions against the repatriation of capital, and technology transfer requirements.

2. Export licensing

Not all trade barriers are of foreign origin. The export licensing system, which is designed to prevent the export of strategically sensitive technology and is administered by the American government, has placed over half of the ABC companies at an international competitive disadvantage.

ABC executives describe the process for obtaining an export license as unnecessarily cumbersome, and marked by squabbling between the Departments of Commerce and Defense. The delay can cost sales since other nations administer their export licensing programs far more efficiently. For example, it takes the United States government an average of 145 days to issue an export license for a Cray Research supercomputer. The government of Japan licenses the export of Japanese supercomputers in thirty days.

The failure of the United States to develop an export licensing system that takes due regard of the nation's strategic interest without unnecessarily impinging on American export sales is in itself a national security issue. As John Rollwagen, Chairman of Cray Research, Inc., notes, "When U.S. high technology manufacturers lose their market share, they lose precious revenue to continue their research and development. Without that revenue for R&D, U.S. corporations will lose their preeminent standing and the country will become dependent on foreign manufacturers for critical technologies."

3. The special case of Japan

By a two-to-one margin, ABC executives identified Japanese companies as their most fierce competitors. By a similar margin, they named the Japanese market as the most resistant to entry. Both observations are part of the same phenomenon:

“The Japanese beat us . . . because of more aggressive management. . . . We invented the transistor in 1947 and by 1960, we supplied 95 percent of all the radios and television sets sold domestically. Today we don't even manufacture radios, and our loss of the color television market is unforgivable. We pioneered that technology.

We also pioneered VCR technology in the 1960s, but we geared it to major users, like TV studios. We couldn't see a consumer market for something with an $8,000 price tag. The Japanese focused on it, turned on their R&D and made a product for home-use. Today, more than 50 percent of all VCR's are made in Japan and exported to us for less than $400. That should have been our product.

And more recently robotics. They were developed in the U.S., but we now lag behind the Japanese in both volume of sales and usage by our industry.

Those are a few of many examples where the loss cannot be blamed on a strong dollar or unfair trading practices or closed foreign markets. We were simply outmanaged. Most of all we lost our reputation for quality when we had been the world's leader. There is no excuse for that and there is no one to blame but American management—not labor, not the government, but management.”

Malcolm Baldrige, Secretary of
Commerce
November 5, 1986

“By the middle 1980s, perhaps the most powerful evidence of political influence on American economic policy appeared in the prolonged failure of the United States to deal in a rational way with the federal deficit, and especially with the relationship of this deficit to the workings of the international economy. During the 1980s, the American people have simply been living far beyond their means. They have drifted into a pattern of financing high living with money borrowed from abroad, particularly from Japan. Because of the Americans' steadfast refusal to address the deficit problem realistically, much of the blame for the recent deterioration in American-Japanese relations, though by no means all of it, must lie at the door of the United States. The president, the Congress, and the electorate all share responsibility for this failure; and the long-term consequences of their paralysis during the middle 1980s will turn out to be far more severe than they seem to realize.”

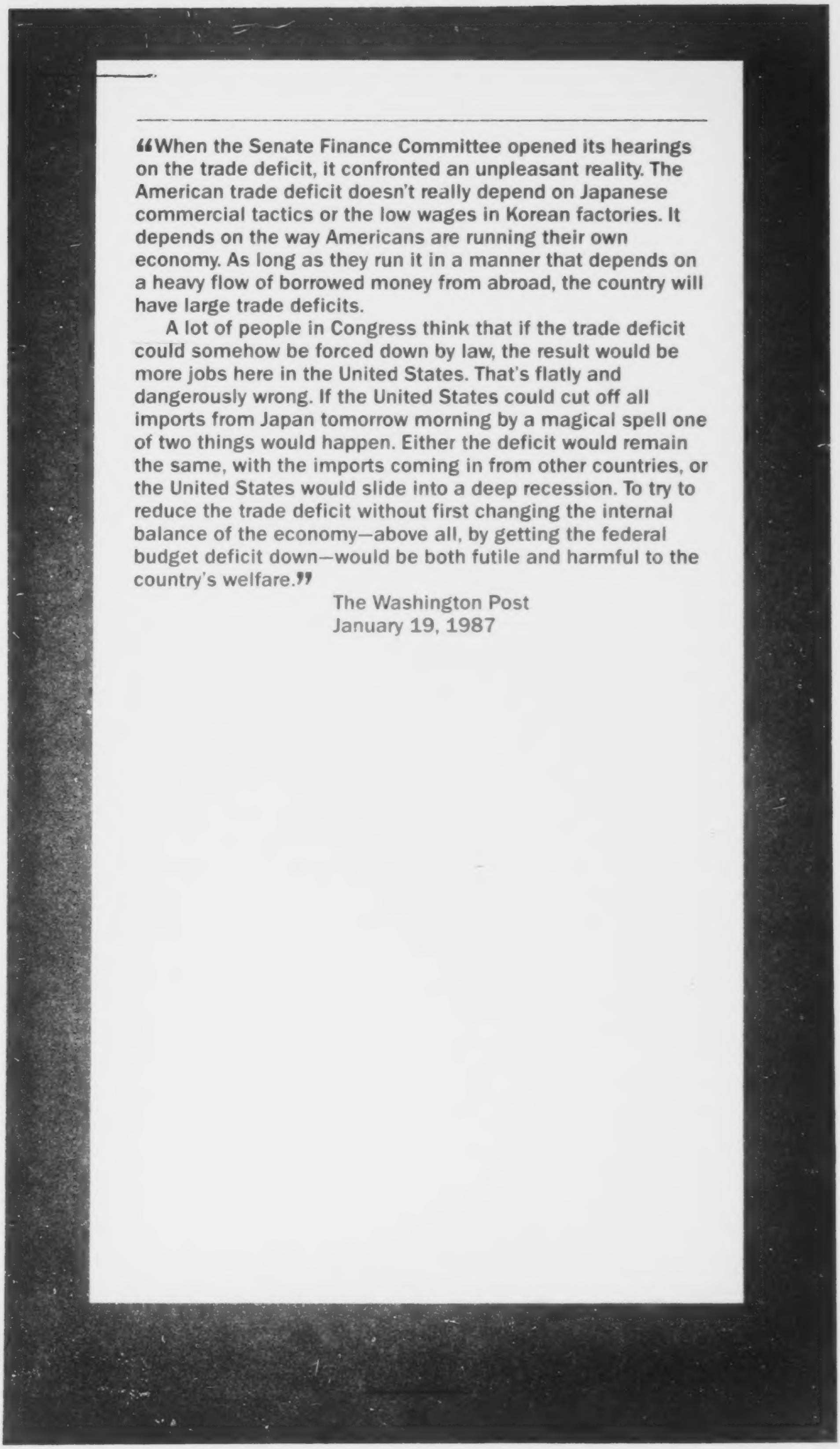
America versus Japan
Thomas K. McCraw, Editor
Harvard Business School
Press, 1986

twentieth century Japanese mercantilism. In order to underwrite their international ventures, Japanese firms rely upon their domination of a secure home market.

As ABC executives noted, American penetration of the Japanese market is vital to meeting Japan's competitive challenge around the world. At issue is how best to open the Japanese market to American business. An answer may lie in an examination of the trade barriers ABC executives attribute to the Japanese. The barrier they cite overwhelmingly is cultural preference. Alteration of cultural habits cannot usually be accomplished through government action. Overcoming cultural chauvinism is essentially a function of the will and skill of American managers. While the growth rates of ABC firms may not be attainable by other, larger companies, the managerial attitudes that made such rates possible are. Unless American business as a whole makes the necessary investment in quality, service, innovation, and strategic marketing, it will never become fully competitive in Japan.

This is not to argue that the American government has no role to play in opening the Japanese market. Some Japanese trade barriers can only be eliminated or, at least, mitigated, through diplomatic pressures. Further, having seen some of the brightest American growth companies of a few years ago—such as those in the semiconductor industry—succumb to Japanese targeting, ABC executives are not prepared to have the government abandon the field of battle.

Nevertheless, ABC executives would argue that government can best help American business penetrate the Japanese market by reducing the federal debt, establishing a sound monetary and tax policy, and encouraging intelligent regulatory and educational reforms. Protectionism, on the other hand, is of no help at all. In the end, government must place the central responsibility for American competitiveness in Japan and elsewhere upon the shoulders of American business where, in our society, it belongs.



"When the Senate Finance Committee opened its hearings on the trade deficit, it confronted an unpleasant reality. The American trade deficit doesn't really depend on Japanese commercial tactics or the low wages in Korean factories. It depends on the way Americans are running their own economy. As long as they run it in a manner that depends on a heavy flow of borrowed money from abroad, the country will have large trade deficits.

A lot of people in Congress think that if the trade deficit could somehow be forced down by law, the result would be more jobs here in the United States. That's flatly and dangerously wrong. If the United States could cut off all imports from Japan tomorrow morning by a magical spell one of two things would happen. Either the deficit would remain the same, with the imports coming in from other countries, or the United States would slide into a deep recession. To try to reduce the trade deficit without first changing the internal balance of the economy—above all, by getting the federal budget deficit down—would be both futile and harmful to the country's welfare."

The Washington Post
January 19, 1987

IV.
FINAL POINTS

This report offers no specific policy recommendations. Instead, forthcoming ABC reports will provide extended discussions of the policy issues raised by the survey, in particular the need to create an appropriate macroeconomic environment for international competitiveness.

At the beginning of this report, America's international competitiveness was said to be deficient. This problem cannot be solved by avoiding it. To retreat from foreign markets because they are difficult to enter, to retreat from the principles of free and fair trade, to retreat from the discipline of competition, is to retreat from our future. Unless we can affirm the values of quality, service, and innovation, we will find ourselves backing into the next decade and into the next century. Other nations will not wait for us to get turned around.

"Analog Devices is running scared. We don't feel at all comfortable about our competitive posture, and we feel the pressure to change our business strategy in order to be successful in the future. In the broadest terms we and other American corporations have depended on product differentiation to extract premium prices from the marketplace. This differentiation could be derived from innovation, quality, and service. Looking to the future, we cannot sidestep the issue of costs and competitive pricing in the international market. The posture of standing aloof from nitty-gritty competition based on a technology gap or other differentiating factors as important as they are and will continue to be is no substitute for aggressive management of productivity and costs. It is not an either/or game; we must not only be leaders in innovation but in cost as well. In this respect we will need all the help we can get, including a competitive cost of capital and the support of a superior educational system."

Ray Stata, Chairman & President
Analog Devices

APPENDIX A

ABC Competitiveness Survey

I. GENERAL COMPETITIVENESS

1. How important to your company is the international competitiveness of the U.S.?
2. Please approximate what percentage of your 1985 sales were derived internationally. ______
3. Please approximate the percent sales growth of your international business 1980-1985. ______
4. Please approximate the projected percent sales growth of your international business 1986-1990. ______
5. For the international market, would you characterize your 1990 projection as . . .
   a. Aggressive b. Reasonable c. Conservative
6. Based on your knowledge and experience, do you feel the firm will likely . . .
   - a. Exceed 1990 international projections,
   - b. Meet 1990 international projections, or
   - c. Not meet 1990 international projections?
7. In general, how do profits on foreign sales contrast to profits on domestic sales?
   - ______ greater
   - ______ same
   - ______ less
8. From what three countries is foreign competition most fierce?

______	______	______
Most competitive	2nd Most competitive	3rd Most competitive
9. If you have faced significant competition from foreign companies, how have you been able to counter this competition?
10. Thinking of the potential of the international market as you see it, how well do you feel your firm's 1985 performance in the international market has met its potential? Would you say performance . . .
    a. Exceeded potential b. Met potential c. Fell below potential
11. In 1985, did international markets exist for which you saw great potential for your firm, but the firm either did not compete or competed less effectively than desired?
    a. YES b. NO

11a. If you answered "Yes" to question 11, please explain why you feel your firm's potential in international markets was not met.

12. Do you have an international marketing force?
    a. YES . . . ______ b. NO
    (# OF PEOPLE)
13. What are the worst tariff and non-tariff barriers with which your company must contend? Feel free to include, if relevant, cultural buying preferences, foreign government incentives or the need to establish a plant in a foreign country.
14. Please describe how trade barriers have affected your company.
15. Do you think trade barriers most adversely affect . . .
    a. New products, or b. Existing products
16. Have you moved any production facilities offshore to cut costs in the last five years?
    a. YES b. NO If "yes," where? ______

17. Do you feel the need to obtain an export license has put your firm at a competitive disadvantage at times?
a. YES—SERIOUSLY b. YES—BUT NOT SERIOUSLY c. NO

18. FACTORS IMPORTANT TO INTERNATIONAL COMPETITION
Sections A and B ask you to rate each factor, on a scale of 1 to 7, to compare your firm to those companies (both domestic and foreign) which your firm competes against in INTERNATIONAL markets.

	A. YOUR INTERNATIONAL PERFORMANCE							B. COMPETITORS' INTERNATIONAL PERFORMANCE						
	POOR						EXCELLENT	POOR						EXCELLENT
a. Product design	1	2	3	4	5	6	7	1	2	3	4	5	6	7
b. Product quality	1	2	3	4	5	6	7	1	2	3	4	5	6	7
c. Value	1	2	3	4	5	6	7	1	2	3	4	5	6	7
d. Low cost producer	1	2	3	4	5	6	7	1	2	3	4	5	6	7
e. Distribution channels	1	2	3	4	5	6	7	1	2	3	4	5	6	7
f. Servicing capability	1	2	3	4	5	6	7	1	2	3	4	5	6	7
g. Marketing	1	2	3	4	5	6	7	1	2	3	4	5	6	7
h. Sales effort	1	2	3	4	5	6	7	1	2	3	4	5	6	7
i. Competitive price	1	2	3	4	5	6	7	1	2	3	4	5	6	7
j. Joint ventures	1	2	3	4	5	6	7	1	2	3	4	5	6	7
k. High quality management	1	2	3	4	5	6	7	1	2	3	4	5	6	7
l. Use of American managers	1	2	3	4	5	6	7	1	2	3	4	5	6	7
m. Use of foreign managers	1	2	3	4	5	6	7	1	2	3	4	5	6	7

19. Which of the following two statements best describe your firm's strategy for competing in international markets?
________ a. We prefer to develop cooperative arrangements with other firms who are already successful in the market we want to penetrate.
________ b. We prefer to choose markets and products with which the firm can compete directly against other firms in the target markets.

20. Which of these two statements best describes how your firm positions its products to compete in international markets?
________ a. We develop or enhance products so they are customized for the target market.
________ b. We seek to develop products with universally acceptable features.

II. FOREIGN SUBSIDIARIES—OPERATING FACILITIES AND SALES OFFICES

Check below the appropriate international areas where you have operating and/or sales offices.

	1985	
	Oper. Facil.	Sales Offices
North America	________	________
South America	________	________
Western Europe	________	________
Eastern Europe	________	________
Middle East	________	________
Asia	________	________
Japan	________	________
Korea	________	________
Oceania	________	________
Africa	________	________

III. EXPORTS

Please list your three most important product categories in terms of revenues.

APPENDIX B

American Business Conference Members

As of December 1986

COMPANY	EXECUTIVE	PRODUCT/SERVICE	LOCATION
Industrial			
Baldor Electric	Roland S. Boreham, Jr.	electric motors	Fort Smith, AK
Brown-Forman	W.L. Lyons Brown, Jr.	wines and spirits, consumer goods	Louisville, KY
Clabir Corporation	Henry D. Clarke, Jr.	consumer and defense products	Greenwich, CT
A.T. Cross	Bradford R. Boss	writing instruments	Lincoln, RI
Damson Oil Corporation	Barrie M. Damson	oil and gas	New York, NY
Devon Group	Marne Obernauer, Jr.	graphic arts	New York, NY
Endevco, Inc.	James W. Bryant	natural gas	Dallas, TX
Farley Industries	William F. Farley	diversified manufacturing	Chicago, IL
Goulds Pumps, Inc.	Stephen V. Ardia	centrifugal pumps	Seneca Falls, NY
Harvey Hubbell, Inc.	Fred R. Dusto	electrical products	Orange, CT
Hasbro Inc.	Stephen D. Hassenfeld	toys	Pawtucket, RI
Herman Miller, Inc.	Max O. DePree	furniture	Zeeland, MI
Knoll International	Marshall Cogan	furniture	New York, NY
Loctite Corporation	Kenneth W. Butterworth	adhesives and sealants	Newington, CT
Masco Corporation	Richard A. Manoogian	diversified manufacturing	Taylor, MI
Mitchell Energy & Development	George P. Mitchell	oil and gas	The Woodlands, TX
Mosbacher Energy Corporation	Robert A. Mosbacher	oil and gas	Houston, TX
Petro-Lewis Corporation	Jerome A. Lewis	oil and gas	Denver, CO
Ply*Gem Industries	Jeffrey S. Silverman	wood products and filter media	New York, NY
Sealed Air Corporation	T.J. Dermot Dunphy	protective packaging	Saddle Brook, NJ
SnyderGeneral Corporation	Richard W. Snyder	heating, air conditioning and refrigeration	Dallas, TX
Teleflex Inc.	Lennox K. Black	applications engineering products	Limerick, PA
Thomas & Betts Corporation	J. David Parkinson	electrical connectors	Raritan, NJ
Unifi, Inc.	G. Allen Mebane	textured polyester	Greensboro, NC
The Valspar Corporation	C. Angus Wurtele	paint and related coatings	Minneapolis, MN
The Yankee Companies	Graham E. Jones	oil, gas, and financial services	Cohasset, MA
Industrial High Tech			
Adams-Russell Company, Inc.	John J. Lynch	signal processing equipment	Waltham, MA
ADC Telecommunications, Inc.	Charles M. Denny, Jr.	telecommunications components	Minneapolis, MN
Analog Devices, Inc.	Ray Stata	integrated circuits	Norwood, MA
Augat, Inc.	Roger D. Wellington	electro-mechanical components	Mansfield, MA
Bolt Beranek & Newman Inc.	Stephen R. Levy	R&D products and services	Cambridge, MA
Bourns, Inc.	Albert R. Snider	military and scientific equipment	Riverside, CA
Burndy Corporation	David Dibner	electronic connectors and electrical power components	Norwalk, CT
Cray Research Inc.	John A. Rollwagen	supercomputers	Minneapolis, MN
DBA Systems, Inc.	Howard N. Hebert	defense, graphics, sensing and diagnostic systems	Melbourne, FL
Dynatech Corporation	J.P. Barger	data communications and test and medical instruments	Burlington, MA
Genentech, Inc.	Robert A. Swanson	medical products	San Francisco, CA
Liebert Corporation	Larry L. Liebert	computer support systems	Columbus, OH
Millipore Corporation	John A. Gilmartin	fluid purification products	Bedford, MA
Pall Corporation	Abraham Krasnoff	filtration equipment	Glen Cove, NY
Rogerson Aircraft Corporation	Michael J. Rogerson	advanced aircraft	Irvine, CA
Tech-Sym Corporation	Wendell W. Gamel	defense electronics	Houston, TX
Teradyne, Inc.	Alexander V. d'Arbeloff	test equipment	Boston, MA
Thermo Electron Corporation	George N. Hatsopoulos	instruments and co-generation systems	Waltham, MA
Western Digital Corporation	Roger W. Johnson	computer subsystems	Irvine, CA
Wyle Laboratories	Stanley Wainer	electronic components and systems	El Segundo, CA
Xidex Corporation	Lester L. Colbert, Jr.	floppy disks and other data storage products and services	Mountain View, CA

COMPANY	EXECUTIVE	PRODUCT/SERVICE	LOCATION
Services –			
Arthur Andersen & Company	Robert W. Philip, Jr.	accounting	Dallas, TX
Automatic Data Processing, Inc.	Josh S. Weston	computer processing	Roseland, NJ
BDM International, Inc.	Earle C. Williams	defense related technical/professional services	McLean, VA
Bergen Brunswig Corporation	Emil P. Martini, Jr.	distribution of health care products and tapes	Orange, CA
Beverly Enterprises	Robert W. Van Tuyle	nursing homes and care facilities	Pasadena, CA
Bill Communications	John W. Hartman	publishing	New York, NY
California Plant Protection	Thomas W. Wathen	security guards	Van Nuys, CA
Care Enterprises	Lee Bangerter	nursing homes	Laguna Hills, CA
Charter Medical Corporation	William A. Fickling, Jr.	medical treatment services	Macon, GA
CCA Investment Corporation	James A. Maser	club management	Dallas, TX
Comdisco, Inc.	Kenneth N. Pontikes	remarketing of used computer equipment	Rosemont, IL
Community Psychiatric Centers	Robert L. Green	psychiatric hospitals	San Francisco, CA
Computer Language Research Inc.	Stephen T. Winn	tax processing	Carrollton, TX
Comp-U-Card International, Inc.	Walter A. Forbes	electronic shopping	New York, NY
Cosmopolitan Care Corporation	Ronald Berman	temporary health care personnel	Stamford, CT
Cullinet Software	John C. Cullinane	computer software	Westwood, MA
Dunkin' Donuts, Inc.	Robert M. Rosenberg	coffee and doughnut shops	Randolph, MA
Electro Rent Corporation	Daniel Greenberg	electronic equipment leasing	Santa Monica, CA
The Forum Group, Inc.	O.U. Mutz	retirement homes	Indianapolis, IN
Grey Advertising, Inc.	Edward H. Meyer	advertising	New York, NY
Harte-Hanks Communications, Inc.	Bob Marbut	communications	San Antonio, TX
Heritage Communications, Inc.	James M. Hoak	cable television	Des Moines, IA
Horn & Hardart Company	Barry M. Florescue	fast food and mail order marketing	New York, NY
Intermark, Inc.	Charles R. Scott	diversified retailer	La Jolla, CA
International Data Group	Patrick J. McGovern	publisher of computer magazines	Framingham, MA
Josephson International, Inc.	Marvin Josephson	entertainment	New York, NY
Korn/Ferry International	Lester B. Korn	executive search firm	Los Angeles, CA
Levitz Furniture Corporation	Robert M. Elliot	furniture retailer	Boca Raton, FL
Marketing Corporation of America	James R. McManus	consumer marketing services	Westport, CT
Meredith Corporation	Robert A. Burnett	publishing and broadcasting	Des Moines, IA
Pandick Inc.	Edward G. Green	financial printing	New York, NY
Peat, Marwick, Mitchell & Company	Larry D. Horner	accounting	New York, NY
Rykoff-Sexton, Inc.	Roger W. Coleman	food distributor	Los Angeles, CA
Safeguard Business Systems, Inc.	Vincent G. Bell, Jr.	management information systems	Ft. Washington, PA
Safety Kleen Corporation	Russell Gwillim	parts cleaner services	Elgin, IL
SMS	R. James Macaleer	medical information systems	Malvern, PA
Standard Brands Paint Company	Stuart D. Buchalter	retailer of home decorating products	Torrance, CA
URS Corporation	Arthur H. Stromberg	engineering and construction	San Mateo, CA
Wherehouse Entertainment, Inc.	Louis A. Kwiker	video cassete rental	Torrance, CA
Financial and Real Estate Services			
American First Corporation	J. David Markley	insurance and financial services	Oklahoma City, OK
Birtcher	Arthur B. Birtcher	commercial real estate	Santa Ana, CA
Chilton Corporation	J.E.R. Chilton III	credit reporting	Dallas, TX
Donaldson, Lufkin & Jenrette, Inc.	John S. Chalsty	financial services	New York, NY
Drexel Burnham Lambert, Inc.	Robert E. Linton	financial services	New York, NY
Fairfield Communities, Inc.	C. Randolph Warner, Jr.	real estate	Little Rock, AK
The Foothill Group	Don L. Gevirtz	commercial finance	Los Angeles, CA
Great American First Savings Bank	Gordon C. Luce	savings bank	San Diego, CA
Heizer Corporation	Edgar F. Heizer, Jr.	venture capital	Chicago, IL
Integrated Resources	Arthur H. Goldberg	financial services	New York, NY
Jack Resnick & Sons, Inc.	Burt P. Resnick	real estate, construction and management	New York, NY
Landmark Bancshares Corporation	S. Lee Kling	multibank holding company	St. Louis, MO
NVHomes	Dwight C. Schar	real estate and construction	McLean, VA
New Plan Realty Trust	William Newman	real estate	New York, NY

PREPARED STATEMENT OF CLARENCE J. BROWN

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I AM PLEASED TO HAVE THE OPPORTUNITY TO APPEAR BEFORE THIS COMMITTEE TODAY TO DISCUSS S. 1233.

REORGANIZING SCIENCE AND TECHNOLOGY FUNCTIONS

I WANT TO TALK FIRST ABOUT THE BILL'S PROVISIONS REORGANIZING THE SCIENCE FUNCTIONS OF THE DEPARTMENT OF COMMERCE.

THE U.S. CURRENTLY SPENDS ABOUT $15 BILLION EACH YEAR ON BASIC RESEARCH (ABOUT $11 BILLION IS FEDERALLY FUNDED). THIS IS ABOUT 10 TIMES MORE THAN ANY OTHER NATION HAS THE IN-PLACE ACADEMIC CAPABILITY TO DO, AND REPRESENTS A DECISIVE COMPETITIVE ADVANTAGE FOR THE U.S. MOREOVER, FUNDING BASIC RESEARCH IS BOTH AN APPROPRIATE AND NECESSARY GOVERNMENT FUNCTION. HOWEVER, IF WE HAVE A TECHNOLOGY COMPETITIVENESS PROBLEM, IT APPEARS TO STEM NOT FROM LACK OF CREATIVITY, BUT FROM OUR APPARENT DIFFICULTY IN TRANSLATING THE RESULTS OF FEDERALLY FUNDED RESEARCH INTO

COMMERCIAL PRODUCTS AND PROCESSES FOR THE BENEFIT OF THE PRIVATE SECTOR.

SPECIFIC BARRIERS TO TRANSLATION CURRENTLY EXIST. THEY INCLUDE THE HIGH COST OF CAPITAL, THE LIABILITY LAWS, OUR PROCESS PATENT LAWS AND THE NEED TO MODIFY §7 OF THE CLAYTON ACT SO AS NOT TO DISCOURAGE PRO-COMPETITIVE MERGERS. IT IS THESE BARRIERS, AND NOT COMMERCE DEPARTMENT OR U.S. GOVERNMENT ORGANIZATIONAL BARRIERS, THAT AFFECT U.S. TECHNOLOGY COMPETITIVENESS.

IN FACT, I BELIEVE IT IS THE QUALITY OF PEOPLE, AND NOT THE ARRANGEMENT OF BOXES, THAT DETERMINES HOW WELL THE GOVERNMENT FUNCTIONS. FOR EXAMPLE, THE SECRETARY OF COMMERCE AND AMBASSADOR YEUTTER HAVE AN EXCELLENT RELATIONSHIP THAT PERMITS THE CLOSEST POSSIBLE COOPERATION BETWEEN OUR TWO AGENCIES. IMPORTANTLY, THIS RELATIONSHIP EXISTS NOT JUST AT THE TOP. AT THE STAFF LEVEL AND UP, WE PROVIDE SUPPORT FOR USTR'S INTERNATIONAL NEGOTIATIONS AND OTHER TRADE POLICY ACTIVITIES.

SIMILARLY, THE DEPARTMENT WORKS WELL TOGETHER ON AN INTRA-AGENCY LEVEL. FOR EXAMPLE, WE ARE NOW ENGAGED IN A SERIES OF CROSS-CUTTING DISCUSSIONS ON A VARIETY OF TOPICS -- SUCH AS EMERGING TECHNOLOGIES AND SUPERCONDUCTIVITY -- WHICH TAKES ADVANTAGE OF AGENCY-WIDE INTERESTS AND EXPERTISE.

MOREOVER, REORGANIZATIONS HAVE THE POTENTIAL TO CREATE UNNEEDED MISCHIEF. UNDER S. 1233, CENSUS IS NO LONGER COMBINED WITH OTHER PARTS OF ECONOMIC AFFAIRS. RIGHT NOW, THE DEPARTMENT COLLECTS, DISSEMINATES AND ANALYZES DATA NOT ONLY FOR ECONOMIC POLICY PURPOSES, BUT FOR STATISTICAL REASONS FAR BEYOND TECHNOLOGY GENERALLY. FOR EXAMPLE, CENSUS AND ECONOMIC AFFAIRS GATHER FOREIGN ECONOMIC STATISTICS THAT ARE NEEDED BY ITA TO ENHANCE THE PROMOTION AND BETTER THE POLICY-MAKING DECISIONS IN THE ARENA OF INTERNATIONAL TRADE. WE ARE THE LARGEST STATISTICAL BODY IN THE GOVERNMENT; THAT MUST NOT CHANGE.

I CANNOT SUPPORT THE ESTABLISHMENT OF THE NEW "ADVANCED CIVILIAN TECHNOLOGY ADMINISTRATION." WE DO NOT NEED THIS NEW PROGRAM, WHICH CARRIES A PRICE TAG OF $480 MILLION OVER THE NEXT THREE YEARS, AND WOULD DUPLICATE FUNCTIONS THAT ARE EITHER BEING HANDLED BY OTHER EXECUTIVE BRANCH AGENCIES OR ARE BEST LEFT TO THE PRIVATE SECTOR.

IN MANY INDUSTRIES THE RESEARCH AND DEVELOPMENT NECESSARY TO REMAIN COMPETITIVE HAS BECOME INCREASINGLY COSTLY AND RISKY. ESTABLISHING ACTA IS NOT THE SOLUTION, HOWEVER. THERE ARE OTHER WAYS TO ADDRESS THIS PROBLEM THAT ARE LOW-COST BUT HIGHLY EFFECTIVE. FOR EXAMPLE, THE NATIONAL COOPERATIVE RESEARCH ACT REMOVES MANY ANTITRUST CONCERNS FROM JOINT R&D ACTIVITY. THE ACT IS BEING USED BY INDUSTRIES TO POOL THEIR RISKS IN HIGHLY SPECULATIVE VENTURES, WITH NO GOVERNMENT INTERFERENCE. SIXTY-ONE VENTURES HAVE BEEN FORMED AND ARE BEING OPERATED UNDER THE ACT.

THE PRESIDENT, IN HIS COMPETITIVENESS INITIATIVES ANNOUNCED LAST JANUARY, PROPOSED A NUMBER OF OTHER STEPS WE SHOULD TAKE THAT DON'T INVOLVE GREAT EXPENDITURES OF MONEY OR MAKING ORGANIZATIONAL REARRANGEMENTS. HIS PROPOSALS INCLUDE -

- ESTABLISHING UNIVERSITY-BASED "SCIENCE AND TECHNOLOGY CENTERS" TO PERFORM LONG-TERM RESEARCH IN SUCH AREAS AS ROBOTICS, MATERIALS-PROCESSING AND BIOTECHNOLOGY;
- A "TECHNOLOGY SHARE" PROGRAM, INVOLVING JOINT RESEARCH WITH CONSORTIA OF U.S. FIRMS AND UNIVERSITIES;
- ADMINISTRATIVE STEPS TO ENCOURAGE AND INCREASE FEDERAL TECHNOLOGY TRANSFERS;
- REEVALUATING SEVERAL ASPECTS OF THE GOVERNMENT'S COMMITMENT TO THE R&D TAX CREDIT;
- ACCELERATING SPIN-OFFS OF DEFENSE-DRIVEN TECHNOLOGIES; AND
- REFORM OF OUR INTELLECTUAL PROPERTY LAWS TO PROVIDE ADEQUATE PROTECTION FOR NEW IDEAS, PRODUCTS AND SERVICES.

IN ADDITION, THIS ADMINISTRATION'S ECONOMIC RECOVERY PROGRAM AND TAX POLICIES HAVE STIMULATED GREAT INCREASES IN PRODUCTIVITY AND GENERATED ENORMOUS ACTIVITY AT THE STATE LEVEL. THERE IS AT

LEAST $700 MILLION OF ACTIVITY IN 43 STATES DEVOTED TO INCREASING PRODUCTIVITY, TECHNOLOGY, AND INNOVATION.

REORGANIZING TRADE FUNCTIONS

WITH RESPECT TO TRADE REORGANIZATION: AS SECRETARY BALDRIGE STATED TO THE COMMITTEE IN MARCH, THE ADMINISTRATION DOESN'T HAVE A POSITION ON THE GENERAL ISSUE OF TRADE REORGANIZATION, BUT I CAN MAKE A FEW PERSONAL OBSERVATIONS ABOUT THE PARTICULAR PROPOSALS EMBODIED IN S. 1233.

THE PREMISE UNDERLYING MANY TRADE REORGANIZATION PROPOSALS IS THAT THE GOVERNMENT'S TRADE FUNCTIONS ARE DISPERSED AMONG TOO MANY GOVERNMENT AGENCIES.

S. 1233 WOULD, IN MY VIEW, TAKE A BIG STEP BACKWARD IN THIS REGARD. IT SEPARATES ONE HALF OF THE INTERNATIONAL TRADE ADMINISTRATION (TRADE ADMINISTRATION AND INTERNATIONAL ECONOMIC POLICY) FROM THE OTHER HALF (TRADE DEVELOPMENT AND THE U.S. &

FOREIGN COMMERCIAL SERVICE). THIS WOULD DISPERSE OPERATIONAL TRADE FUNCTIONS, INSTEAD OF COMBINING THEM. AND IT WOULD SERIOUSLY ERODE THE ABILITY OF EACH OF THESE UNITS TO DO THEIR JOB. FOR EXAMPLE, ITA/TA'S EXPORT-LICENSING, AND EVALUATIONS OF DRAFT ANTIDUMPING AND COUNTERVAILING DUTY PETITIONS, RELY HEAVILY ON COUNTRY-SPECIFIC COMMERCIAL INFORMATION AVAILABLE THROUGH ITA/IEP AND US&FCS.

OUR "MOSS" TALKS WITH JAPAN, IN WHICH THE DEPARTMENT PLAYED A MAJOR ROLE, COULD NOT HAVE BEEN AS EFFECTIVE AS THEY WERE WITHOUT SECTORAL INPUT FROM ITA/TD, THE COUNTRY-SPECIFIC EXPERTISE OF ITA/IEP'S JAPAN OFFICE, AND ASSISTANCE FROM US&FCS' TOKYO OFFICE.

IN THE CASE OF U.S. FOREIGN POLICY CONTROLS ON OIL AND GAS EQUIPMENT TO THE USSR, FOR EXAMPLE, TRADE DEVELOPMENT, WHICH HAS THE SECTORAL EXPERTISE, PROVIDED TRADE ADMINISTRATION WITH POSITIVE EVIDENCE OF SUCH WIDESPREAD FOREIGN AVAILABILITY AS TO RENDER THE CONTROLS INEFFECTIVE. THAT FACTOR WAS CRITICAL TO THE

ADMINISTRATION'S DECISION TO LET THE OIL AND GAS CONTROLS EXPIRE. THAT'S JUST AN EXAMPLE, AND I THINK THE BILL OVERLOOKS THE CONTRIBUTIONS THAT EACH OF THESE UNITS MAKES TO THE DEVELOPMENT AND IMPLEMENTATION OF OUR NATIONAL TRADE POLICY, AND DEPRIVES THEM OF THE INTERACTIVE SUPPORT THEY NEED IN ORDER TO BE EFFECTIVE. CUTTING ITA IN HALF WOULD BE A BIG MISTAKE.

THE BINGAMAN PROPOSALS

MR. CHAIRMAN, I WANT TO ADDRESS BRIEFLY THE PROPOSALS ADVANCED BY SENATOR BINGAMAN FOR INCLUSION IN THE BILL. WE SIMPLY CANNOT SUPPORT THEM.

- MORE ADVISORY BODIES ARE NOT NEEDED. THE PRESIDENT HAS AT HIS DISPOSAL A VAST ARRAY OF INFORMATION AND ADVICE CONCERNING U.S. COMPETITIVENESS. THERE EXIST LITERALLY DOZENS OF NATIONALLY BASED GROUPS AND COMMITTEES, REPRESENTING EVERY SECTOR OF OUR ECONOMY, THAT CONVEY THEIR VIEWS REGULARLY TO THE PRESIDENT. THERE IS JUST NO NEED FOR MORE CHANNELS FOR ADVICE ON THESE ISSUES.

- CODIFYING THE PRESIDENT'S TRADE ADVISORY STRUCTURE IS A BAD IDEA. THE PRESIDENT OUGHT TO HAVE THE DISCRETION TO ORGANIZE HIS OFFICE THE WAY HE WANTS, AND THAT INCLUDES HOW HE GETS HIS ADVICE ON TRADE AND ECONOMIC ISSUES. EVERY PRESIDENT ESTABLISHES A STRUCTURE THAT WORKS BEST FOR HIM. IT WOULD BE A MISTAKE TO SET ANY ONE SYSTEM IN STONE.
- COMPETITIVENESS IMPACT STATEMENTS WON'T WORK. THE PROCESS LEADING UP TO EVERY LEGISLATIVE PROPOSAL SHOULD INCLUDE CONSIDERATION OF ITS IMPACT ON OUR TRADE POSITION AND ABILITY TO COMPETE. BUT ESTABLISHING A NEW PAPERWORK REQUIREMENT WILL JUST BURDEN THE PROCESS. IT WON'T IMPROVE THE RESULT, MR. CHAIRMAN.

- THE NATIONAL TRADE DATA BANK WOULD BE UNMANAGEABLE AND UNNECESSARILY EXPENSIVE AS PROPOSED. THE ADMINISTRATION HAS PROPOSED A TRADE DATA SYSTEM, THE COMMERCIAL INFORMATION MANAGEMENT SYSTEM, THAT WILL MEET THE REAL NEEDS OF U.S. EXPORTERS, WITHOUT DUPLICATING SERVICES PROVIDED BY THE

PRIVATE SECTOR. IT'S NOT AS AMBITIOUS AS SENATOR BINGAMAN'S BUT IT WILL BE A LOT MORE COST-EFFECTIVE.

THE CHILES AMENDMENTS

MR. CHAIRMAN, I ALSO UNDERSTAND THAT SENATOR CHILES MAY OFFER SEVERAL AMENDMENTS ON A VARIETY OF TOPICS DURING YOUR MARKUP, AND I WOULD LIKE TO COMMENT BRIEFLY ON THOSE.

- REQUIRING REVIEW OF FOREIGN FINANCIAL ACQUISITIONS WILL BE SELF-DEFEATING. AS IN OTHER TRADE AREAS, THE BEST WAY TO OPEN FOREIGN MARKETS IS BY NEGOTIATION, NOT BY CLOSING OUR OWN. LIMITING FOREIGN ACQUISITION OF FINANCIAL INSTITUTIONS IS DIRECTLY CONTRARY TO THE OPEN INVESTMENT POLICY WHICH HAS BEEN A PILLAR OF UNITED STATES TRADE POLICY SINCE BEFORE WORLD WAR II, AND WOULD SERIOUSLY UNDERMINE OUR EFFORTS TO SEEK GREATER ACCESS FOR U.S. FINANCIAL INSTITUTIONS AND SERVICES ABROAD. WE CANNOT OPEN UP THE INVESTMENT ABROAD IF WE RESTRICT OUR OWN. CAPITAL FLOWS SHOULD BE DIRECTED BY MARKET FORCES, NOT BY BARRIERS TO INVESTMENT.

- REQUIRING DISCLOSURE FROM FOREIGN INVESTORS IS NOT A GOOD IDEA AT ALL. THIS AMENDMENT REQUIRES THE REGISTRATION OF CERTAIN FOREIGN DIRECT INVESTMENTS IN THE U.S. BY FOREIGN INVESTORS. BY MANDATING THE PUBLIC DISCLOSURE OF PROPRIETARY INFORMATION, THIS AMENDMENT WOULD CREATE SIGNIFICANT DISINCENTIVES TOWARD FOREIGN INVESTMENT IN THE UNITED STATES. FACED WITH THE PROSPECT OF BEING REQUIRED TO RELEASE SIGNIFICANT CONFIDENTIAL INFORMATION REGARDING ITS OWNERSHIP, STRUCTURE AND OTHER HOLDINGS, A FOREIGN INVESTOR MAY DECIDE TO INVEST ELSEWHERE, AFFECTING OUR ABILITY TO FINANCE THE U.S. DEBT AND THREATENING US WITH INFLATION. WE DEPEND ON FOREIGN INVESTMENT FOR FRESH CAPITAL. FOREIGN INVESTMENT CREATES JOBS FOR U.S. WORKERS, AND ENHANCES THE COMPETITIVENESS OF U.S. COMPANIES.

FROM PUBLIC RECORDS, AND UNDER THE INTERNATIONAL INVESTMENT IN TRADE AND SERVICES ACT, THE COMMERCE DEPARTMENT COLLECTS, COMPILES AND PUBLISHES DATA ON INDIVIDUAL TRANSACTIONS AS

WELL AS AGGREGATED TOTALS, AND ASSESSES THE POTENTIAL IMPLICATIONS OF SIGNIFICANT INVESTMENTS. WHILE THESE DATA ARE COLLECTED FROM A WIDE VARIETY OF SOURCES (FOR EXAMPLE, SECURITIES AND EXCHANGE COMMISSION FILINGS, PRESS REPORTS, VOLUNTARY NOTIFICATIONS), EXPERIENCE HAS SHOWN THAT THIS PROCESS IDENTIFIES ALMOST ALL MAJOR OR POTENTIALLY SENSITIVE INVESTMENTS.

IN ADDITION, PROPOSED FOREIGN DIRECT INVESTMENT TRANSACTIONS WITH POTENTIALLY ADVERSE IMPLICATIONS FOR U.S. NATIONAL INTERESTS ARE REFERRED TO THE INTERAGENCY COMMITTEE ON FOREIGN INVESTMENT IN THE UNITED STATES (CFIUS) FOR CONSIDERATION AND POSSIBLE REVIEW. FEW, IF ANY, POTENTIALLY SENSITIVE TRANSACTIONS HAVE BEEN CONCLUDED WITHOUT THE KNOWLEDGE OF THE CFIUS.

THE DISCLOSURE OF INDIVIDUAL NAMES COLLECTED BY OUR STATISTICAL AGENCIES WOULD VIOLATE THE LONG STANDING PRINCIPLE OF

THE MAINTENANCE OF CONFIDENTIALITY FOR THE COLLECTION OF STATISITCAL DATA BY THE UNITED STATES GOVERNMENT. ONCE THAT PRINCIPLE IS VIOLATED THE RESULTANT DISTRUST OF GOVERNMENT DATA COLLECTION EFFORTS WILL WEAKEN OUR ENTIRE STATISTICAL SYSTEM.

FINALLY, THIS AMENDMENT WILL UNDERMINE OUR EFFORTS TO OPEN THE ECONOMIES OF OTHER COUNTRIES TO FOREIGN INVESTMENT. I AM STRONGLY OPPOSED TO IT.

- SEMATECH. SEMATECH IS A CONSORTIUM OF ABOUT 40 U.S. ELECTRONICS COMPANIES THAT ARE EITHER MAKERS OR USERS OF DYNAMIC RANDOM ACCESS MEMORY SEMICONDUCTORS. THE CONSORTIUM HAS BEEN ESTABLISHED FOR THE PURPOSE OF CONDUCTING RESEARCH RELATING TO ADVANCED SEMICONDUCTOR MANUFACTURING TECHNIQUES. THE CONCEPT OF THE SEMICONDUCTOR INDUSTRY COOPERATING TO MEET COMPETITIVE CHALLENGES IS SOUND, ALTHOUGH ONE POSSIBLE BARRIER TO

THIS COOPERATION IS CREATED BY THE ANTITRUST LAWS, ANL THIS ISSUE SHOULD BE EXAMINED. HOWEVER, WE WOULD OPPOSE ANY FEDERAL SUBSIDY FOR SUCH AN ORGANIZATION BECAUSE THE MATTER IS PRESENTLY UNDER REVIEW IN THE EPC. ALTHOUGH THERE IS NOW A DETAILED OPERATIONAL PLAN BY THE INDUSTRY FOR SEMATECH, A NUMBER OF POLICY ISSUES MUST BE RESOLVED BEFORE THE APPROPRIATE EXTENT - AND FORM - OF GOVERNMENT PARTICIPATION, IF ANY, CAN BE DETERMINED.

I THINK THAT IT WILL TAKE A WHILE TO ADDRESS THESE ISSUES, AND, THEREFORE, INCLUSION OF SEMATECH IN OMNIBUS TRADE LEGISLATION WOULD BE PREMATURE.

IN CONCLUSION, MR. CHAIRMAN, THE ADMINISTRATION HAS A NUMBER OF CONCERNS WITH THE BILL IN ITS PRESENT FORM, AND THERE ARE SEVERAL FEATURES THAT, IF YOU KEEP THEM IN, WOULD MAKE IT DIFFICULT FOR US TO RECOMMEND TO THE PRESIDENT THAT HE APPROVE THE BILL.

THANK YOU, MR. CHAIRMAN.

TESTIMONY OF AMBASSADOR ALAN WOODS
DEPUTY UNITED STATES TRADE REPRESENTATIVE

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

June 8, 1987

Mr. Chairman and Members of the Committee, I welcome the opportunity to discuss the proposals now before this Committee on reorganization of the trade policy functions of the Executive Branch. I hope that we can give these proposals the thorough consideration that they deserve before any action is taken on them.

Let me begin by suggesting some of the principles you should measure these proposals against. The objectives that we all should seek in this trade bill are:

-- to enhance American competitiveness;

-- to increase U.S. leverage in international trade negotiations, and to make it possible to use this leverage to benefit American workers, farmers and producers; and

-- to avoid counterproductive changes that cost more than they deliver in benefits.

There are also a number of particular considerations that I believe merit your attention, including:

-- the timing of this proposed reorganization;

-- the severe short-term disruption it would cause for our negotiating efforts;

-- the problems caused by placing a sizable new line agency in the Executive Office of the President;

-- the dis-economies of scale involved in making a small, mobile negotiating policy team into a middle-sized bureaucracy while leaving a second middle-sized bureaucracy in place; and

-- the effect that such a reorganization would have on the interagency trade policy process, and on the balance of interests between the industrial and agricultural sectors.

Mr. Chairman, I understand the widespread frustration that exists with the trade deficit. We share that frustration. However, we can't solve our trade problems through trade policy or through trade law enforcement alone. We have begun by working on the economic fundamentals: increased economic growth and reducing the Federal budget deficit. But our work, and the efforts of other agencies, can only set the stage for dynamic activities by the private sector to get our exports moving into world markets. The market we face is a global one today.

Existing Executive Branch institutional arrangements in the trade area work well, and have worked particularly well in responding to the trade pressures of the last few years. Now, at the height of such pressures, when Congress and the private sector demand the most of us, is the wrong time to reshuffle the distribution of responsibilities in the area of trade.

My comments today are focused solely on those proposals affecting international trade and investment. I defer to the representative of the Department of Commerce regarding proposals to reorganize the Department, and to create an Advanced Civilian Technology Administration. I will comment briefly on proposals that may be offered in the Committee concerning trade and investment.

Trade Reorganization Proposals

S. 1233 proposes a broad reorganization of both USTR and the Department of Commerce. Two offices from the Department of Commerce would be transferred to USTR: the Office of the Assistant Secretary for Trade Administration, and the Office of the Assistant Secretary for International Economic Policy. USTR would be renamed the United States Trade Administration, and would remain within the Executive Office of the President. USTR would go from a total staff of 150 to over 1150, becoming by far the largest agency in the Executive Office (more than twice as large as OMB). The remaining agencies of the Commerce Department would be reorganized into a Department of Industry and Technology, including a new Advanced Civilian Technology Administration.

Mr. Chairman, our problems with this proposal only begin with its timing. We are in the process of negotiating a complex set of new rules for international trade in the Uruguay Round; we are approaching the climax of negotiations on an epoch-making Free Trade Area agreement that will open Canadian markets to our exports of goods and services and lower barriers to investment; we face record trade and current account deficits with Japan and the newly industrialized countries; and we are in the midst of an unparalleled crisis in agricultural production and trade worldwide.

Reorganization of any type, at any time, creates massive short-term costs -- the uncertainty over who will do what in the new organizational structure, plus the logistical problems of building space and communications. Trade reorganization guarantees a substantial period of turmoil in the making of U.S. trade policy. Now is not the time.

I understand the attractiveness of the trade bill as a vehicle for a reorganization proposal, but reorganization is a tremendously costly enterprise and we believe it should be undertaken only after this Committee and the Administration have had the opportunity for extensive study, consultation and reflection. I trust that these hearings will underline to you the need to consult fully with all parts of the private sector and to consider fully how trade policymaking and operations would be affected by reorganization, before going forward with a reorganization plan. If a trade reorganization is worth doing and if it merits wide support, it can be done without hurrying it to meet the trade bill's timetable.

Let me comment on the specifics of the proposed USTA. Mr. Chairman, I do not think that increasing USTR's size to 1,150 would improve USTR as an organization, or improve the government's ability to deal with trade issues. Rather, it would weigh USTR down. It is one of the iron laws of bureaucracy that every increase in an organization's size increases its bureaucratic problems geometrically. Making USTR seven times its current size will only increase the amount of time its leadership spends on operational detail and red tape, without any observable benefits.

We are concerned not just about the proposed USTA's size, but also about the location of an operational agency in the Executive Office of the President. The U.S. Trade Administration would dwarf all other units in the Executive Office. The two offices concerned in the International Trade Administration of the Commerce now have a combined staff of approximately 1000. Together with USTR's staff of 150, they would add up to a staff of about 1150. This would be more than twice the size of the Office of Management and Budget, which has a staff of slightly over 500. The agencies within the Executive Office staff should be focused on integrating the views of government departments and agencies with line responsibilities, and helping the President make those crucial decisions that are his alone to make. They should not be encumbered by size or by non-policy responsibilities.

The specific Commerce responsibilities proposed to be transferred, Trade Administration and International Economic Policy, do not belong in the Executive Office of the President. The proposal suggests that these two offices would provide "the intelligence capabilities necessary for more effective trade negotiation and the enforcement mechanisms necessary for more effective implementation of our trade policies." However, in the enforcement areas here -- antidumping, countervailing duties, anti-boycott compliance and export controls -- the trend of legislation has been to try to depoliticize enforcement, and to minimize the use of trade policy as part of an enforcement mechanism. Antidumping and countervailing duty determinations, for instance, are made on the basis of an administrative record; trade policy interference can be grounds for reversal in the Court of International Trade. And while USTR staff already work closely with the staff of the Office of International Economic Policy (IEP) in developing negotiating positions, we agree with the Commerce Department that you should not split the International Trade Administration. Both IEP and Trade Administration should stay where they are.

Transfer of these enforcement responsibilities would dilute the mission of USTR and hamper its functioning. The Trade Representative now concentrates on trade policy and negotiations, as his highest priority. For instance, Ambassador Yeutter has personally spent many hundreds of hours negotiating with Japan and with the European Communities over the past two years. Weighing the Trade Representative down with routine enforcement decisions will take away from the time and attention he can spend on the higher priority negotiating and trade issues.

Let me mention another point that concerns us. One criticism of earlier proposals for a trade agency has been that an agency assembled by merging USTR into Commerce might not give appropriate weight to the concerns of American farmers and our agricultural trading community. The same point could be made about this proposal as well. Over 98 percent of the staff of the proposed USTA would be focused on the concerns of the industrial sector. Agricultural constituencies might understandably assume that the resulting USTA would be institutionally biased in favor of industrial concerns over agricultural concerns.

Presumably, the USTA would draw its agricultural trade expertise from the Department of Agriculture through the interagency trade policy process. But if the interagency process is sufficient for agricultural issues, why is it not sufficient in the case of the industrial sector, and why must we incur the costs of reorganizing ITA? Similarly, we would strongly oppose any move, paralleling S. 1233, to split FAS from the domestic side of USDA -- if this were ever even proposed -- for the same reasons that we oppose splitting the domestic and international functions of the Commerce Department. Mr. Chairman, I doubt that the agricultural community, on reflection, will give support to S. 1233.

Trade policy is now made by a process that effectively integrates domestic and international economic concerns, and balances the concerns of agriculture, industry, business and labor. This is the "interagency process": a shorthand expression for a network of committees, at the cabinet level, the subcabinet level, and the staff level. These committees -- the Economic Policy Council, the Trade Policy Review Group, the Trade Policy Staff Committee and more specialized groups -- air all aspects of trade policy issues, and make decisions on trade policy and implementation which have the participation and support of all of the actors in the process. Each agency that participates brings to the table its expertise, and its domestic or international constituency as well.

The interagency process works, and works well. It works because USTR is the broker of conflicting interests, and draws on other agencies' expertise. Making USTR into a centralized trade agency would reduce participation and support by other agencies, impede dialogue with private sector groups and reduce our ability to address your trade concerns through trade negotiations.

All governments, even those with a "trade" ministry, disperse trade responsibilities to some extent. On U.S.-Japan trade issues, for instance, I have faced negotiators from not just the Ministry of International Trade and Industry, but also the Ministry of Foreign Affairs, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Posts and Telecommunications, and even the Ministry of Transportation. It is not necessary to unify all functions labeled "trade" in one agency. The Japanese don't; the EC doesn't; and we shouldn't. The interagency process run from the Executive Office of the President makes it possible for us to react faster, with a more unified government position, than our negotiating partners in Japan or in Europe. And it could not happen without USTR, as a coordinator to pull together the diverse interests that go into our trade policy.

If there is a problem with executive branch trade organization, it is not that a wide range of departments and agencies have some role in trade policy. USTR's role is to integrate the various views and constituencies into an effective trade policy, and negotiate. USTR can do this job far better than the USTA could.

Other trade organization proposals

I support whole-heartedly the comments of the Commerce Department on the proposals advanced by Senator Bingaman for inclusion in the Committee bill. The Administration is already on record in opposition to the proposal in H.R. 3 for a Council on Economic Competitiveness. In the trade area, we already have an extensive network of advisory committees, representing every sector of agriculture, industry and labor, managed in coordination with the Departments of Agriculture, Commerce, Defense and Labor. We think these committees do their job well now; there is just no need for more advice. Moreover, the budget for the proposed Council is so large that it suggests an intention to create a Council that would not just advise, but also interfere in the economy.

Amendments on Investment

I have a few comments on the amendments on investment-related issues which I understand Senator Chiles intends to offer during the markup.

First, there is a proposal to impose comprehensive registration and disclosure requirements on foreign investments in portfolio equity, real estate or holdings in U.S. companies. This proposal mirrors the Bryant amendment, section 703 of H.R. 3.

Mr. Chairman, we cannot afford to impede foreign investment in our financial instruments. This proposal will jeopardize U.S. firms' access to funds from abroad, funds that can help their competitiveness through financing modernization and new technology. Rather than go through burdensome disclosure requirements, foreign investors will tend to keep their capital at home, or invest in more hospitable countries. If U.S. firms cannot raise as much money from abroad, they will have to borrow here; the upward pressure on U.S. interest rates will drive up the cost of capital for all U.S. firms, and disadvantage them in the world competition. Moreover, since this amendment is retroactive in effect, it could lead to a sell-off of foreign interests in U.S. portfolio and direct investment.

This proposal places the burden of registration and disclosure on foreign investors -- but the disclosure also concerns the affairs of the domestic company in which the foreign investment is made. Mr. Chairman, there would appear to be no need for such disclosure. Considerable detail is disclosed already, but without revealing the business affairs of the investor or the enterprise invested in. The Bryant amendment would harm U.S. competitiveness and handicap us in our fight to turn around the trade deficit.

Another proposal is to establish an interagency financial acquisitions review board, chaired by the Treasury Department, to review any proposed establishment or acquisition by a foreign concern of a five percent or greater interest in any U.S. business concern that provides financial services. The board would take into account reciprocal market access opportunities in the country where the foreign concern has its principal place of business.

The Administration opposes this cumbersome review process, which is contrary to our open investment policy. This proposal could reach far beyond banks and securities concerns, and affect life insurance companies or any other company that happens to provide financial services. It conflicts with state prerogatives in regulating banking, life insurance and certain other financial services. It could also make us violate most-favored-nation commitments in our Treaties of Friendship, Commerce and Navigation, if institutions from treaty countries (such as Germany, Japan and France) were treated less favorably than institutions from other countries.

Under the policy mandate of the International Banking Act of 1978, the Treasury Department has negotiated with foreign countries such as Japan to seek national treatment abroad, so that U.S. financial institutions can participate in foreign markets on the same basis as domestic institutions. This policy is working. Before rewriting it, there should be thorough consideration of it in the context of existing banking and securities statutes and policies. This is another item that is too far-reaching in effect to do on a hurry-up timetable.

Thank you, Mr. Chairman. I would be pleased to answer any questions that you or Members of the Committee might have.

STATEMENT OF GARY N. HORLICK
JUNE 8, 1987

SENATE COMMITTEE ON GOVERNMENT OPERATIONS

1. S. 1233 is a move in the right direction on trade policy making, and should be supported. At present, the United States has two trade policy agencies, both at Cabinet rank: the Department of Commerce and the Office of the U.S. Trade Representatives. A certain amount of bureaucratic duplication and "turf fighting" is inevitable in that circumstance.

Commerce, in addition to the 2,000 employees in its International Trade Administration, has thousands of employees working on other activities. The Secretary of Commerce's time is inevitably drawn into controversies over whether to close a weather station in Oklahoma, or whether limits should be put on fishing off New England shores to preserve stocks. The U.S. Trade Representative, although small (130 people officially, probably more including all employees detailed from other agencies, interns, and so on) is nearly four times larger than it was in 1979 when it coordinated the U.S. negotiations in the last GATT trade round. Thus, U.S.T.R. is large enough to seek to do its own staff work, but not large enough to do it without active and prompt cooperation from other agencies. Most important, U.S.T.R. is not "in" the

White House. While it is in the Executive Office of the President, White House staff do not regard it as one of "them," but rather as yet another "outside" cabinet-level agency. It is viewed as having its own agenda (generated by its own analysis and staff work), rather than serving as an "honest broker."

Even with the best will in the world, the type of strong minded individuals whom you want making trade policy in those two agencies are bound to have different views on at least some of the many trade issues before the U.S. In that context, the excellent career people at Commerce and U.S.T.R. will certainly have the intelligence to follow their own boss's lead, and not that of the other agency.

The other major problem presented by the current arrangement is the absence of an independent,"honest broker" in the White House. International trade policy will *inevitably* require an interagency process. Decision making in this area properly requires consideration of many factors -- not only the merits of the immediate trade issue, but also concerns for the health of the U.S. domestic economy (especially agriculture), our relations with our allies and non-allies, our national security needs, and many other possible factors. In this context, the current Economic Policy Council (EPC) has done an excellent job of coordinating U.S. trade policy since its creation in mid-1985. I would give that organizational change a considerable amount of credit for the increased ability of the Administration to respond to the pressure of the trade deficit and to legitimate congressional concern with a much more aggressive policy since 1985 of enforcement of U.S. trading rights overseas. Nevertheless, the EPC is a temporary creation, and perhaps more important, has a very limited staff (1 and 1/2 people), which is not sufficient for the role it should play.

2. S. 1233 would greatly improve our position by placing all trade policy staff in one agency, the new USTA, under one leader.

This would avoid the inevitable interagency divisions which occur now, since they could resolved by one person at the top, while still permitting USTA to serve as a forum for the creation of a trade policy that properly reflects the many legitimate interests of the United States.

This would not interfere with nor politicize the normal trade administration functions, such as export licenses or antidumping/countervail, which are performed by Commerce's International Trade Administration at present. Most of those matters are already handled at career levels. Any more significant cases are currently reviewed by a trade policy maker -- the Secretary of Commerce -- so there would be no harm from combining that job with the other lead trade policy maker.

3. For the future, the U.S. should be considering a Department of Trade. The United States eventually will need a single Department of Trade, shaped somewhat like the proposed USTA. While the sensitivity of creating additional cabinet departments is understandable -- the Carter Administration would have created a Department of International Trade had it not just created the Departments of Education and Energy -- it should be clear by now that international trade will be a sufficiently important and specialized area to justify Departmental status. This is also important for what may seem like silly bureaucratic reasons. The top U.S. trade official, and his or her subordinates, should have the same kind of cabinet and subcabinet level titles as their peers, both within the interagency process and internationally. This may sound petty, but it should not be underrated.

As important, there should be a Cabinet-level interagency group with a small professional international trade staff in the White House serving as an "honest broker" among the various agencies. This will ensure that viewpoints of other interests, such as agriculture, defense, foreign policy, and domestic economic concerns, are taken account of in making international trade policy -- obviously, this is less likely to happen where there is one international trade agency, be it a Department or a USTA, without an "honest broker" in the White House. The staff -- no more than ten professionals -- would not only evaluate and prepare neutral evaluations of agency proposals but also would actively seek to make sure that all agencies were aware of and involved in issues that might affect them.

The model for this "honest broker" can be found in a book by Roger Porter entitled Presidential Decisionmaking, written after he had served in the Ford White House and before he served in the Reagan White House. It similarity with the EPC is obvious.

A good Secretary of Trade would view such a White House presence as an ally, which can help ensure that trade policy issues are given high level attention when needed.

These changes will not eliminate the trade deficit, which reflects economic phenomena more than governmental action, nor will it guarantee unanimity within the trade policy decision processes of our very diverse country. What they will do is assure that we are using our trade policy resources as efficiently as possible in dealing with a volatile world where insufficient staff work or a divided government can be easily exploited by negotiators on the opposite side of the table.

PREPARED STATEMENT OF ROBERT S. STRAUSS

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I WELCOME THIS OPPORTUNITY TO APPEAR BEFORE YOU TO SHAPE MY VIEWS REGARDING HOW THE U.S. GOVERNMENT ORGANIZES ITSELF. HOW IT MAKES AND IMPLEMENTS POLICY REGARDING INTERNATIONAL TRADE AND TECHNOLOGY, IS A SUBJECT WHICH HAS RECEIVED CONSIDERABLE ATTENTION IN RECENT YEARS. WE HAVE SEEN MANY PROPOSALS TO PROMOTE MORE EFFECTIVE AND COHERENT INTERNATIONAL ECONOMIC POLICIES. NOW INDUSTRIAL COMPETITIVENESS, RESEARCH AND COMMERCIALIZATION OF NEW TECHNOLOGIES HAVE BEEN ADDED TO THIS SET OF ISSUES.

THIS DISCUSSION CANNOT TAKE PLACE IN A VACUUM, HOWEVER. TO PROPERLY ADDRESS THE ORGANIZATION OF OUR POLICY MAKING PROCESS, IT'S ESSENTIAL TO EXAMINE THE TRADE AND INDUSTRIAL COMPETITIVENESS POSITION OF THE UNITED STATES.

IN ORDER TO THINK MORE CLEARLY AND CONSTRUCTIVELY ABOUT THESE ISSUES, I FIND IT HELPFUL TO KEEP CERTAIN CORE CONCEPTS IN MIND AND DISTINGUISH ONE FROM ANOTHER:

- THERE ARE TRADE POLICY PROBLEMS WHICH AFFLICT PRODUCERS AND CONSUMERS IN THE UNITED STATES AND OTHER COUNTRIES AND WHICH HAVE A NEGATIVE IMPACT ON THE INTERNATIONAL TRADING SYSTEM. EXAMPLES ABOUND IN THE FIELDS OF AGRICULTURE, TELECOMMUNICATIONS, INTELLECTUAL PROPERTY RIGHTS AND ELSEWHERE. THESE PROBLEMS MUST BE AGGRESSIVELY ATTACKED BECAUSE THEY ADVERSELY AFFECT PRODUCER INTERESTS IN OUR COUNTRY, AND, IN TURN, OUR OVERALL ECONOMIC WELFARE. BUT WE SHOULD NOT DELUDE OURSELVES INTO BELIEVING THAT THESE TRADE POLICY PROBLEMS ARE THE SOLE OR EVEN MAJOR CAUSE OF OUR TRADE DEFICIT OR THAT THEY ARE THE MAJOR DRAG ON OUR ECONOMY. THEY ARE NOT.

- SEPARATE AND APART FROM THESE TRADE POLICY PROBLEMS, THERE ARE ECONOMIC PROBLEMS FACING OUR NATION AND THE WORLD WHICH DEMAND OUR ATTENTION. IT IS THESE ECONOMIC PROBLEMS WHICH GREATLY AFFECT THE TRADE PERFORMANCE OF OUR COUNTRY. THESE ECONOMIC PROBLEMS WERE CREATED LARGELY BY MACROECONOMIC POLICIES WHICH MUST BE ADJUSTED. THERE ARE NO QUICK FIXES FOR THESE PROBLEMS. IT TOOK YEARS OF BAD ECONOMIC POLICIES TO CREATE THEM; IT WILL REQUIRE TIME TO UNDO THEM.

IT IS EASY -- OFTEN TOO EASY -- TO BLAME ALL OUR TRADE PROBLEMS ON FOREIGNERS, ALL NATIONS DO THAT. FOREIGNERS DON'T VOTE. BUT IT IS NOW TIME TO BEGIN ASKING OURSELVES SOME TOUGH QUESTIONS ABOUT THE PERFORMANCE OF THE U.S. ECONOMY. WHY IS IT, FOR EXAMPLE, THAT U.S. PRODUCTIVITY GROWTH LAGS FAR BEHIND THOSE OF OUR PRINCIPAL COMPETITORS AND HAS DONE SO FOR MANY YEARS? IN THE 1960'S, OUR PRODUCTIVITY GREW AT A RATE THAT DOUBLED OUR STANDARD OF LIVING EVERY 25 YEARS. AT TODAY'S RATE OF GROWTH, IT WILL REQUIRE 70 YEARS.

WHY IS IT THAT IN THE U.S., EXPENDITURES FOR RESEARCH AND DEVELOPMENT, INVESTMENT IN NEW PLANT AND EQUIPMENT, AND OTHER CRITICAL SIGNS OF ECONOMIC VITALITY ARE LAGGING COMPARED WITH OTHER COUNTRIES? WHAT ARE WE GOING TO DO ABOUT OUR BUDGET DEFICIT? WHY AREN'T WE, AT LEAST, LEVELING WITH THE AMERICAN PEOPLE ABOUT THE IMPLICATIONS AND ATTEMPTING TO GET THEIR POLITICAL SUPPORT TO ADDRESS THESE PROBLEMS? DESPITE THE POSITION OF THE ADMINISTRATION, ALMOST ALL THINKING PEOPLE KNOW WE MUST HAVE MORE REVENUES TO ADDRESS OUR BUDGET DEFICITS. WE CANNOT BEGIN TO ADDRESS

OUR COUNTRY'S TRADE PROBLEMS IN A MEANINGFUL WAY UNLESS WE BEGIN TO COME UP WITH ANSWERS TO THESE AND OTHER TROUBLING QUESTIONS.

MR. CHAIRMAN, YOU HAVE INTRODUCED LEGISLATION WHICH SERIOUSLY ADDRESSES THE QUESTION OF HOW WE ORGANIZE OUR GOVERNMENT TO DEAL WITH OUR INTERNATIONAL ECONOMIC SITUATION. I AGREE THAT IT IS ESSENTIAL FOR US TO ELEVATE SCIENCE AND TECHNOLOGY POLICY TO A HIGHER STATUS WITHIN THE U.S. GOVERNMENT. FURTHERMORE, WE MUST INTEGRATE OUR TECHNOLOGY POLICY WITH OUR DOMESTIC ECONOMIC POLICIES TO PROMOTE THE STRENGTHENING OF OUR INDUSTRIES. THE COMMERCIALIZATION OF NEW TECHNOLOGIES NEEDS TO BE TAKEN FROM A SLOGAN, AND MADE INTO A REALITY IN THE EVERY DAY MARKET PLACE.

THE JAPANESE HAVE BECOME MASTERS AT THE ART OF COMMERCIALIZING NEW TECHNOLOGIES. MUCH HAS BEEN MADE OF THE JAPANESE EMPHASIS ON RESEARCH AND DEVELOPMENT, OF THE STAGGERING PROPORTION OF ENGINEERS AND SCIENTISTS IN JAPANESE SOCIETY, AND OF THE STRENGTH OF THE JAPANESE EDUCATIONAL SYSTEM. BUT THE JAPANESE HAVE GONE BEYOND THE POINT OF BEING ONLY STUDIOUS AND IMITATIVE. JAPANESE COMPANIES HAVE BECOME EXTREMELY ADEPT AT BRINGING NEW TECHNOLOGIES

TO THE MARKET PLACE QUICKLY, AND IN THE FORM MOST ATTRACTIVE TO CONSUMERS. WE INVENTED THE VCR, THEY COMMERCIALIZED IT, TO GIVE A SIMPLE EXAMPLE ALL CAN UNDERSTAND. OUR SCIENTISTS RECENTLY MADE DRAMATIC ADVANCES IN DEVELOPING SUPERCONDUCTING MATERIALS. BUT SOME OF OUR LEADING TECHNOLOGY-BASED COMPANIES ARE NOW LOCKED IN TO INTENSE COMPETITION WITH THE JAPANESE OVER WHO WILL BE FIRST TO REFINE THE TECHNOLOGY AND COMMERCIALIZE IT.

OUR GOVERNMENT MUST FOSTER A NEW AGE OF COLLABORATION BETWEEN OUR SCIENTIFIC AND TECHNICAL COMMUNITIES AND THE WORLD OF COMMERCE. WE MUST BRIDGE THIS GAP, AND GOVERNMENT CAN PLAY AN IMPORTANT ROLE IN THIS PROCESS.

AT THE SAME TIME, I HAVE STATED OPENLY THAT THE TIME HAS COME TO REEXAMINE THE QUESTION OF HOW BEST TO CONSOLIDATE TRADE POLICY MAKING IN THE EXECUTIVE BRANCH. POSSIBLY, A DEPARTMENT OF INTERNATIONAL TRADE MAY BE THE ANSWER. AN OFFICE OF U.S. TRADE ADMINISTRATOR, AS PROPOSED IN THE LEGISLATION BEFORE THIS COMMITTEE, IS ALSO WORTHY OF CONSIDERATION.

It is a mistake to think that we will resolve our monumental trade problems by rearranging the boxes on government organization charts. But I do believe that trade policy must be assigned a higher priority within the U.S. government, and that it must be centralized.

I also believe it is important to draw a distinction between the types of activity outlined in your legislation in the areas of research and development, and commercialization of new technologies on the one hand, and industrial policy on the other. Government should not be in the business of picking winners and losers; we should not strive for a planned economy. But there is a strong tradition in this country of the government playing a role in guiding and funding research. This has been particularly true in the areas of defense and space exploration. It is now time that the government play an equally strong role in supporting research and development that is oriented towards commercial uses.

As this legislation moves forward, it will run a serious risk of becoming bogged down in the partisan politics of trade.

THIS ADMINISTRATION MAY SEE THE BILL AS A SLAP AT ITS HANDLING OF TRADE AND ECONOMIC MATTERS. I WOULD, THEREFORE, SUGGEST THAT THE BILL BE GIVEN AN EFFECTIVE DATE OF JANUARY 1989. THAT WAY YOU CAN LET A NEW ADMINISTRATION HAVE A FRESH START WITH A NEW FRAMEWORK FOR MAKING POLICY.

THIS LEGISLATION ALSO TAKES AN INTERESTING APPROACH TO REORGANIZATION BY CONSOLIDATING TRADE POLICY FUNCTIONS WITHIN THE EXECUTIVE OFFICE OF THE PRESIDENT. I BELIEVE THIS APPROACH MERITS SERIOUS CONSIDERATION. THE OBJECTION, HEARD FROM SOME, IS THAT THIS IS A BAD IDEA SIMPLY BECAUSE IT WOULD INCREASE THE SIZE OF THE OFFICE OF THE PRESIDENT -- THIS JUST DOESN'T HOLD WATER. SPEAKING FROM MY OWN EXPERIENCE AS SPECIAL TRADE REPRESENTATIVE AND THROUGH SEVERAL ADMINISTRATIONS, I MUST SAY THAT THE NUMBER OF PEOPLE IN THE OFFICE OF THE PRESIDENT IS JUST A QUESTION OF BUREAUCRATIC ACCOUNTING. THE ISSUE OF WHERE AND HOW TO CONSOLIDATE TRADE POLICY MAKING SHOULD BE ADDRESSED ON ITS OWN MERITS.

QUESTIONS HAVE BEEN RAISED ABOUT THIS AND OTHER REORGANIZATION PROPOSALS, REGARDING WHETHER THE ADMINISTRATION OF THE

ANTIDUMPING AND COUNTERVAILING DUTY LAWS WOULD BE OVERLY POLITICIZED. IT IS DOUBTFUL, HOWEVER, THAT THE LOCATION OF THE OFFICE OF IMPORT ADMINISTRATION WITHIN THE U.S. GOVERNMENT, WILL MAKE OUR IMPORT RELIEF LAWS ANY MORE OR LESS POLITICAL. WHETHER THE ADMINISTRATION OF OUR TRADE LAWS BECOMES POLITICIZED IS DETERMINED BY OTHER FACTORS INCLUDING THE QUALITY OF THE STAFF AND THE DETERMINATION OF TRADE OFFICIALS AT THE POLITICAL LEVEL TO INSULATE THIS PROCESS FROM POLITICAL FORCES.

AS I CONCLUDE, I HOPE IT IS NOT PRESUMPTUOUS TO DRAW SOME BROADER LESSONS I'VE LEARNED FROM MY EXPERIENCE IN THE PUBLIC AND PRIVATE SECTORS.

NUMBER ONE: THE EXECUTIVE BRANCH MUST SPEAK WITH ONE VOICE ON TRADE POLICY. WE NEED A TRADE POLICY FOR AMERICA -- NOT A TRADE POLICY FOR TREASURY, COMMERCE, STATE, STR OR DEFENSE. TRADE PROBLEMS MUST RECEIVE THE PERSONAL ATTENTION OF THE PRESIDENT AND HIS WHITE HOUSE ADVISORS. I CAN'T EMPHASIZE THIS POINT ENOUGH. NO FOREIGN NATION WILL TAKE OUR TRADE NEGOTIATIONS AND POLICIES SERIOUSLY UNLESS THEY BELIEVE THAT THE PRESIDENT IS PERSONALLY INVOLVED IN THE PROCESS.

NUMBER TWO: THE SEARCH FOR NEW IDEAS IN THE TRADE POLICY ARENA IS NOT A SUBSTITUTE FOR EFFECTIVE ACTION. OVER THE PAST FEW YEARS, MEMBERS OF CONGRESS, BUSINESS LEADERS, THINK TANKS OF ALL POLITICAL PERSUASIONS, AND ACADEMICS HAVE BEEN WORKING TO EXPLAIN OUR TRADE PROBLEM AND DEVELOP NEW SOLUTIONS. HOWEVER, THE SEARCH FOR NEW IDEAS, WHILE WORTHWHILE, HAS BECOME AN END IN ITSELF. WE MUST NO LONGER POSTPONE ACTION. WE MUST REDUCE THE DEFICIT, DEAL WITH THIRD WORLD DEBT IN A SENSIBLE FASHION, CRACK DOWN ON UNFAIR TRADE PRACTICES, AND COORDINATE TRADE POLICY WITHIN THE EXECUTIVE BRANCH, WHETHER WITH A NEW OFFICE OF U.S. TRADE ADMINISTRATOR OR A NEW TRADE DEPARTMENT. I LONG OPPOSED A NEW TRADE DEPARTMENT, AS HAVE MANY OF YOU, BUT MAYBE IT'S AN IDEA WHOSE TIME HAS COME. AT ANY RATE, IT SHOULD BE EXAMINED AND ACCEPTED OR REJECTED FOR THE RIGHT REASONS, NOT TO SATISFY NARROW BUREAUCRATIC INTERESTS. IT'S NOT A SUBSTITUTE FOR SUBSTANTIVE ACTION, BUT IF DONE IN THE PROPER WAY, COULD HELP US DEVELOP AND EXECUTE TRADE POLICY.

NUMBER THREE: NEITHER THE CONGRESS NOR THE EXECUTIVE BRANCH CAN MAKE GOOD TRADE POLICY ON THEIR OWN. THEY MUST WORK TOGETHER.

NUMBER FOUR: PARTISAN TRADE POLICY IS BAD TRADE POLICY. I'VE TALKED OF FORGING A POLITICAL CONSENSUS. AS TRADE REPRESENTATIVE, I WORKED CLOSELY AND CONSTRUCTIVELY WITH LEADERS ON BOTH SIDES OF THE AISLE. IT WAS BIPARTISAN SUPPORT THAT WAS ESSENTIAL TO THE DRAFTING AND PASSAGE OF THE 1979 TRADE ACT ALMOST UNANIMOUSLY IN THE HOUSE AND SENATE.

NUMBER FIVE: TRADE POLICY CANNOT BE SEPARATED FROM DOMESTIC ECONOMIC POLICY. THE GREATEST SINGLE PROBLEM BEHIND OUR TRADE DEFICIT IS OUR BUDGET DEFICIT. AN OVERVALUED DOLLAR PRICED US OUT OF KEY MARKETS AND MADE IMPORTS APPEALING TO OUR CONSUMERS. FORTUNATELY, WE'VE SEEN IMPROVEMENT LATELY.

NUMBER SIX: GOVERNMENT CANNOT DEVELOP EFFECTIVE TRADE POLICIES IN ISOLATION -- BUSINESS, AGRICULTURE, AND LABOR MUST BE DEEPLY INVOLVED IN THE POLICY PROCESS IN A COLLABORATIVE FASHION. IN 1974, THE CONGRESS ESTABLISHED A PRIVATE SECTOR ADVISORY SYSTEM TO ENSURE THAT PRIVATE SECTOR INPUT WAS FULLY CONSIDERED IN FORMULATING TRADE POLICY. THIS SYSTEM, IN MY OPINION, HAS RECENTLY BEEN NEGLECTED AND SHOULD BE RESTORED.

NUMBER SEVEN: TRADE TODAY, AS WHEN THE NATION WAS FOUNDED, IS A COMMERCIAL PROCESS BASED ON RECIPROCAL TREATMENT. IT MUST BE FAIR OR IT CANNOT WORK. WE HAVE EXERCISED WORLD LEADERSHIP BY KEEPING OUR MARKETS OPEN AND OUR INVESTMENT CLIMATE UNRESTRICTED. OTHER NATIONS HAVE NOT ALWAYS RECIPROCATED. NOW THE MESSAGE SHOULD GO FORTH FROM YOUR DELIBERATIONS THAT THOSE WHO WISH TO SELL THEIR GOODS AND OFFER THEIR SERVICES IN OUR MARKETS MUST EXTEND SIMILAR TREATMENT TO US. TO SAY IT MORE DRAMATICALLY, THOSE WHOSE SHIPS LOADED WITH PRODUCTS ENTER OUR HARBORS MUST MAKE ROOM FOR OUR SHIPS IN THEIRS.

NO MATTER WHAT WE DO WITH DEFICITS, DOMESTIC AND FOREIGN GROWTH, THIRD WORLD DEBT AND OTHER CRITICAL ISSUES, THE ISSUES OF TRADE POLICY, INDUSTRIAL COMPETITIVENESS, AND TECHNOLOGY POLICY ARE PARAMOUNT TO THE CONTINUED ECONOMIC WELL-BEING OF THIS COUNTRY. IN ORDER TO FORMULATE AND IMPLEMENT EFFECTIVE POLICY IN THESE AREAS, WE SHOULD ORGANIZE THE FUNCTIONS OF OUR GOVERNMENT IN A MANNER THAT REFLECTS NEW PRIORITIES. I BELIEVE THAT YOUR LEGISLATION, MR. CHAIRMAN, IS AN IMPORTANT CONTRIBUTION TO THIS PROCESS.

Testimony Before The Senate Committee On Government Affairs.
Regarding Senate Bill 1233, "The Economic Competitiveness,
International Trade, & Technology Development Act of 1987."
Presented By Robert N. Noyce, Vice Chairman
Intel Corporation, Santa Clara, California
June 9, 1987

Mr. Chairman, I am Robert Noyce, vice chairman of Intel Corporation, a semiconductor manufacturing company based in Santa Clara, California. I would like to testify today in support of "The Economic Competitiveness, International Trade, & Technology Development Act of 1987" (S.1233). I intend to discuss the two central issues addressed by the bill--technological development and trade--and the measures that need to be taken to remedy difficulties associated with both.

But first I would like to stress that the overarching problem identified by this bill is a lack of national competitiveness, or, to cite the Young Commission, our country's ability "to produce goods and services that meet the test of international markets while simultaneously maintaining and expanding the real income of [our] citizens." The problem is that we are finding it increasingly difficult to succeed in international markets (including our own) and are witnessing significant limits on the growth of our profits and incomes. In short, our standard of living is being threatened, and something must be done quickly to counter this economic challenge.

America's weakness in international markets is clearly demonstrated by our enormous trade deficit. After having been positive for almost 100 years, our merchandise trade balance turned negative in the 1970s and last year reached a record deficit of over $160 billion. Our share of world trade in manufactured goods (as measured by value) has been declining for over two decades.

As our ability to compete effectively in world markets declines, so too does our standard of living. For example real wages have been relatively stagnant for almost a decade and a half. In the first quarter of this year hourly compensation rose by the smallest amount in more than 25 years. Profits too have suffered. Over the last 20 years real returns on manufacturing assets have declined. In the 1980s they fell significantly below the real rates of return on financial assets, thus undermining the relative attractiveness of investing in American manufacturing. The growing trade deficit has also cost us jobs--currently over 4 million, by some estimates.

One of the principal reasons for our trade imbalance and associated problems is that foreign governments have coordinated and funded efforts to target particular industries for major expansion and penetration of American markets, while insulating their markets from American competition. Confronted by foreign government-sponsored subsidies, dumping, and protectionism, American industries--steel, automobile, television, and now semiconductor--have experienced enormous obstacles.

To regain our competitive edge, our Government too must take a more active role in supporting industry. Otherwise, we shall have to accept a declining standard of living because individual American firms simply do not have the resources to counter the challenges posed by entire governments. In particular, there are two areas toward which we must direct public efforts in order to restore our national competitiveness: technological development and trade assistance.

Technological innovation--driven by research and development--is important because it advances productivity. In fact, more than any other factor (e.g., capital, labor, economies of scale), it has been the most important contributor to American productivity growth in the last half century. The perfection of technological ideas and the means to apply them to full-scale manufacturing processes is essential for the maintenance of high levels of productivity and competitiveness. If our technological base is weakened, so is our general economic health.

What has happened in the last few decades is that American productivity has suffered a relative decline. In absolute terms we are more productive than our industrial competitors, and our productivity has increased over time. However, in relative terms, our productivity growth rate has lagged behind that of our major national rivals. As other countries catch up with our level of productivity through the assistance of their governments, we must further increase our productivity to remain competitive. And this requires an intensified effort to promote technological innovation.

The problem, though, is that our technological development has been insufficient to the task. The core of the difficulty is this: American manufacturers have not been able to fund commercial R&D at levels that are comparable to those achieved through the vast resources of foreign governments. Foreign manufacturers' greater access to commercial R&D resources has enabled them to accelerate their pace of technological innovation and national economic growth at the expense of American profitability.

U.S. commercial technological development has been especially hampered in three ways. First, R&D funding is focused on the wrong area. Almost half the nation's total R&D is spent by the Federal Government on specific missions which do not have industrial competitiveness as a primary concern. The problem here is that products developed for Government purposes may have only limited commercial utility because they are not primarily focused on cost-effectiveness and commercial applications. In short, the problem is that too much of our R&D funds are diverted into areas that do not offer immediate commercial benefits.

The second impediment to technological development in the U.S. is that capital costs are relatively high. Investment capital is relatively inaccessible or expensive for U.S. firms for a variety of reasons. The most important contributor to this problem--and, I would add, the single largest impediment to U.S. national competitiveness--is the large Federal budget deficit, which now absorbs over half the available capital in the American marketplace. Another constraint is the extremely low personal savings rate in the United States compared to other, major industrial countries. Our tax system too limits capital formation by offering disincentives for investment. In this regard, it was disappointing to see the R&D tax credit cut back by 20%

in the 1986 tax reform bill; we should be opening up more opportunities for R&D, rather than further restricting them.

These factors have combined to make it more difficult for American firms to raise capital to fund R&D. For example, in contrast to an acceptable U.S. profit margin of 5-6% (after-tax profit on sales), the Japanese financial system allows firms to succeed with only 1-2% profit margins. Japanese firms can then use the extra funds for additional capital investments or R&D. As a result of relatively high capital costs, American managers are forced to take a short-term perspective (for rapid returns on capital), and U.S. firms end up with less long-term investments in their future growth than do their foreign counterparts.

The shortage of R&D capital becomes more critical for industries that are especially reliant on maintaining high levels of research and development. For example, the U.S. semiconductor industry is more dependent on R&D than any other American industry. Last year--in a very difficult period for semiconductors--the industry's R&D spending as a proportion of net revenue equaled 16.4%. My company, Intel, even surpassed 18%. In order to develop our latest, major technological breakthrough, the 80386 microprocessor, we spent $100 million--and this was just one project. Forced to concentrate such a large share of total revenue on R&D, we become extremely vulnerable to market fluctuations affecting other areas. In short, the limited availability of investment capital in the U.S. seriously impairs the viability of our advanced, capital-intensive industries, which are already under intense pressure to maintain high levels of R&D funding.

Third, advances in technology and productivity are constrained by neglect of the commercial applications of basic research. In other words, the U.S. has been slow in advancing from the results of fundamental research (in terms of ideas or prototype designs) to process technology and manufacturing. We are now seeing an example of such an applications handicap in the area of superconductivity. While Americans have been responsible for most of the significant breakthroughs in basic research, the Japanese are already concentrating on commercial applications through a national business/government consortium.

Part of the problem is that universities perform most of this country's basic research. Without greater access to such research, industry cannot quickly respond to the marketplace. Another disadvantage is that U.S. firms simply have not devoted adequate attention to the often complex technologies involved in the development of full-scale production equipment and processes.

As a result of these constraints on technological development, U.S. firms have insufficient cash flow and institutional connections to pursue R&D projects that would maximize their growth and productivity. To overcome the problem of inadequate commercial R&D, resources have to be accumulated outside the narrow constraints of individual firms and applied to the promotion of commercial technology and efficient production. Since individual firms cannot accomplish this task alone, some larger institutional mechanism is needed. I would like to suggest two, complementary approaches.

First, sufficient R&D resources to meet the technology challenge can be accumulated and applied through the Government. R&D funding through a

Government agency is a useful approach in that (a) it can focus national attention on the need to strengthen technological development, and (b) by absorbing some of the risk it can promote R&D projects that firms individually would not undertake. In other words, the rationality and benefits of the whole (offered through a public agency) are much more than the sum of the parts.

Senator Glenn's bill provides a particularly useful formulation of this approach, as embodied in his proposal for an Advanced Civilian Technology Agency (ACTA). One benefit of ACTA is that as a civilian agency it will be able to concentrate on issues of efficiency and commercial application, an advantage it has over defense agencies like the Defense Advanced Research Projects Agency (DARPA). A second merit is that the short-term tenure and industry origins of its staff will ensure a maximum sensitivity to industry's--and not extraneous--needs. Third, ACTA should minimize costs and maximize benefits to the taxpayer by allocating funds on a cost-sharing basis and seeking to recover investments where possible. Finally, I hope (and recommend) that ACTA can facilitate closer cooperation between industry and academia through the executing R&D organizations it selects (especially for the goal of reducing cycle time between prototype design and volume production).

ACTA carries on a long-standing tradition of effective Government encouragement of research and development in academia and industry, ranging from the promotion of land-grant colleges to aerospace research in the National Advisory Committee for Aeronautics (NACA). This proposal takes Government support one step further by consolidating a multiplicity of nondefense R&D funding sources in one agency in order to provide more coherent policy--a measure compatible with the recommendation of the Committee on Research, Development, and Manufacturing of the President's (Young) Commission on Industrial Competitiveness.

Not only is this solution more efficient (by eliminating overlap and conflicting purposes), but it also is a long-needed response to the institutional technology champions of our principal industrial competitors. For example, the Research and Technology Ministry of the Federal Republic of Germany has provided a significant impetus for applied commercial research through the Fraunhofer Gesellschaft, an association of 25 institutes whose main goal is to speed commercialization and spread the results of technological advances on the basis of joint government/industry financing. In Japan the Ministry for International Trade and Industry (MITI) encourages and coordinates long-term, collective R&D projects with an emphasis on industrial participation and control and commercial applications of technological developments. It should be noted that these governmental sponsors of technology exist in countries that already enjoy traditions of strong industry investment in R&D. If we want to compete, we need institutional mechanisms that can accomplish similar goals.

A second approach that can be used in conjunction with a Government agency such as ACTA is for industry itself to concentrate and utilize R&D resources through cooperative efforts. The advantage of such an endeavor is that each industry knows best how to focus its resources for optimal, collective technological development.

In the semiconductor industry we have already succeeded with such collective efforts, e.g., the Semiconductor Research Cooperative (SRC), which provides financial support to universities for basic research. Now we are attempting to move beyond this initial research stage in order collectively to strengthen our commercial application efforts. We intend to accomplish this objective through the establishment of a Semiconductor Manufacturing Technology Institute, or Sematech. This organization will develop and test advanced manufacturing technology within a high volume production environment and transfer the perfected process technology to the member firms. We thereby plan to catch up with our foreign competitors in our weakest technological area: commercial applications and manufacturing techniques. Although we initially need matching funds from the Federal Government to enable us to start this project, Sematech will become solely industry supported after the first six-year period. We hope that the Government will not only support our efforts, but will also encourage similar projects by other industries.

Strengthened technology through invigorated research and development will help improve America's trade imbalance and national competitiveness. But it is not enough. Although we may have competitive products, we still need to bring them to foreign markets. While our exports have continued to grow in recent years, they have not expanded nearly enough to compensate for imports and maintain profits, salaries, jobs, and our standard of living.

One major problem confronting U.S. exports is that we are not realizing our exporting potential. Only about 12% of U.S. manufacturing firms export, and 85% of all our exports derive from merely 250 companies. In comparative perspective, per capita exports of manufactured goods from German and Japanese firms are respectively four and two times higher than those of their U.S. counterparts.

The tragedy is that we could be exporting much more than we are. It has been estimated that 11,000 additional American companies are currently capable of exporting (and bringing in an extra $4 billion per year in export earnings). That they do not is especially attributable to inadequate U.S. export promotion. Britain, France, and Japan spend over three times as much as the U.S. to promote exports, and their efforts are much more aggressive and well-staffed than ours.

In light of this inadequacy, I support Senator Glenn's proposals to reorganize and strengthen our national trade efforts. Before commenting on those proposals, however, I would like to stress that, regardless of any particular Administrative structure, its success critically depends on the people who direct it. In this regard, two individuals have made quite a difference in the last few years, namely the Secretary of Commerce, Malcolm Baldridge, and the U.S. Trade Representative, Clayton Yeutter. I would like to commend them for their outstanding contributions and express the hope that we can continue to attract people of their caliber to lead our renewed efforts in achieving a strong trade posture.

Concerning Senator Glenn's proposals, I encourage, first, his attempt to reorganize the Commerce Department into a Department of Industry and Technology (DIT) and especially to create an office of Under Secretary of Industry. The latter will be particularly useful in integrating domestic and international economic affairs into a coherent effort to promote exports.

I would furthermore recommend that the Under Secretary of Industry undertake the following:

1) improve the acquisition, coordination, and dissemination of international trade information for U.S. firms;
2) in cooperation with industry, create a major export promotion effort (through a quasi-public export promotion organization), which would offer trade shows, technical assistance, etc.;
3) expand public and private export finance programs, e.g., by stimulating greater private sector lending through the Eximbank (which now finances only 6% of U.S. exports, compared with its Japanese, British, and French equivalents, which finance 35%, 35%, and 29%, respectively).

Second, I support Senator Glenn's proposal to reorganize the office of the U.S. Trade Representative (USTR), now to be called the U.S. Trade Administration (USTA). By providing the USTR with more immediate access to trade data and enforcement functions, its authority will be significantly enhanced. Thus, the USTA will hopefully be in a stronger position to guarantee the operation of equitable trade agreements and to maintain open foreign markets for American goods, a problem that has frustrated the semiconductor industry in the last few years. Furthermore, by keeping the USTA outside the Cabinet, its role will be maintained as an "honest broker", or independent authority that can mediate between different Departmental interests without being captured by any one. This arrangement should overcome the objections previously raised against the proposal for a Department of International Trade and Industry (DITI) and therefore have a greater chance of success.

In summary, America is now facing a major challenge of competitiveness, which can only be met by intensifying our efforts to increase technological development and promote exports. Senator Glenn's bill offers useful solutions in both of these areas. First, it establishes an institutional mechanism to concentrate and distribute funds for industrial R&D in order to promote advances in technology and productivity that individual firms could not achieve alone. Second, it coordinates and strengthens our efforts to increase exports and ensure fair trade agreements and open markets through the reorganization of Federal offices concerned with trade. Hopefully these Governmental measures will also stimulate private efforts to increase productivity and expand trade so that our nation can successfully meet the international comptetive challenge and thereby maintain and improve its standard of living.

Thank you for the opportunity to allow me to express my views--which I feel represent the perspective of a large number of my colleagues in industry--on these very important issues.

PREPARED STATEMENT OF DR. ROBERT E. KAHN

My name is Dr. Robert E. Kahn and I am President of the Corporation for National Research Initiatives (NRI). From October 1972 to September 1985 I was with the Defense Advanced Research Projects Agency (DARPA). As Director of its Information Processing Techniques Office, I was responsible for the agency program in information processing technology and its application to defense. I left DARPA about a year and a half ago to pursue my interest in establishing NRI.

NRI was formed in 1986 as a non-profit organization in the District of Columbia to provide long range funding and leadership for scientific research and development leading to advanced civilian applications of information processing technology. Our current focus is on research to foster the development of an advanced information infrastructure for the United States which we believe will stimulate economic growth and lead to improved productivity.

NRI is currently funded by research grants from industry and, in our short existence, we have signed agreements with the Digital Equipment Corporation, the Xerox Corporation and the International Business Machines Corporation; various other industrial agreements are under discussion. Though currently small, the board of NRI was established by design to have approximately a third representation from academia, a third senior leaders from industry and a third from other sectors of society, thus forming a kind of national trust to guide our efforts. We have undertaken to create a long range civilian technology research organization in the private sector that may be directly relevant to portions of the bill, S. 1233, under consideration today.

The views I am expressing here today are my own and do not reflect those of DARPA, NRI or any organizations with which we collaborate. However, I think the existence of an organization such as NRI, even in its early developmental stage, may be of interest to the committee members as you attempt to address the critical issues facing not only the information processing industry, but all technology dependent industries and the research community that supports them.

It is both natural and I think essential for the government to play a major role in insuring that the long term interests of the nation in civilian technology are adequately protected. The problem of achieving effective long term technological investment is as much a problem of long term financing as it is a problem of technological leadership. I believe the government is in the best position to amass the necessary resources for long term investment on a large enough scale and in a stable enough way to foster sustained economic growth in an era of increasing international competitiveness. With such federal investments, the incentives for industry to participate can be greatly enhanced.

There may be many different approaches worth exploring to help achieve this objective. One of these is the creation of a government agency, the Advanced Civilian Technology Agency (ACTA), to oversee critical areas of civilian technology investment where high technology and long term investment are essential factors. In the remainder of my remarks, I will limit my comments to the portion of S. 1233 which would establish ACTA, since that is where I feel I can be most helpful.

There are four fundamental parts to the civilian technology process which should be highlighted. First is the innovation or invention part of the process in which new ideas are explored and new technologies are created. Second is the transfer of technology from the research laboratory into products and services. The third part of the process is effective commercialization. Fourth, but not necessarily last in the sequence, is the necessary infrastructure to support the preceeding three parts.

We have in place within the United States a powerful and highly effective research capability to generate new ideas and convert them into new technology. By comparison, we could be more effective as a nation at the other three parts of the process. In general, we should continue to encourage and draw upon our research capabilities, while developing workable techniques and mechanisms to strengthen these other three parts. Collaborative university/industry activities, joint commercial research and development ventures and consortia are examples of mechanisms which are receiving increased attention in the areas of transfer and commercialization. Experimentation with other potentially viable alternatives seems highly desirable and should be encouraged.

I strongly support the overall concept of establishing an organization such as ACTA to deal actively with this entire process at a national level. In fact, the idea is sufficiently important that the committee should consider it, regardless of the disposition of the rest of the bill. Senator Glenn indicates in his remarks on the bill that he considers ACTA to be "the most important aspect of the legislation." Thus my comments apply only to the nature of the ACTA organization and not to the specific vehicle chosen to house it. The choice of vehicle is properly a matter for the entire committee to determine.

The bill stipulates coordination with DARPA and the National Science Foundation (NSF) and includes their Directors on the ACTA advisory board as members ex-officio. Both of these organizations would be candidates, among others, to undertake or contribute to an effort of this kind. It is worth noting that civilian technology and defense technology, more often than not, either are or have the potential to be one and the same. Much technology that originates out of defense requirements ends up as dual-use technology with commercial applications. Likewise, defense has the option to adopt civilian technology as it becomes available, although the issues of assured sourcing and export control are relevant. In its review of this proposed legislation, I would urge the committee to consider how closely an effort at stimulating civilian technology and the attendant problems of commercialization should be linked with either national security or basic scientific research.

If ACTA is to be considered as the civilian counterpart to DARPA," it may be useful to summarize what I believe are the essential characteristics of DARPA that have made it so successful over almost three decades. These are listed below:

1. Investments in high risk/high potential technology areas for finite periods of time to establish the feasibility of the technology and to transfer it as appropriate.

2. A small and highly qualified staff to carry out the agency program with planned high turnover of personnel (typically 20% or more per year) with little bureaucratic impediment.

3. An organization essentially dedicated to high level planning and decision making within the context of an approved

agency program with little vertical structure and virtually free of political pressure.

4. An adequate and stable budget over time, appropriated directly by the Congress to carry out the Agency programs.

5. The ability to enter into research and development contracts with the best qualified organizations in the U.S. (or even in other countries, if essential).

6. No in-house procurement or research functions within the Agency and the ability to use outside agents for contracting and research management.

7. The flexibility to react quickly to unanticipated developments in any relevant technological field so as to insure defense interests are rapidly met.

8. An acceptance of the possibility of failure because of the high risk associated with the nature of its research projects.

9. The willingness of organizations in the research community to work closely with DARPA in light of the acknowledged importance of DARPA's national security mission.

10. Close interaction and cooperation with the Office of the Secretary of Defense (OSD) and the military services including the assignment of military personnel to DARPA.

I believe all these attributes should apply to the new civilian agency with the exception of those that are unique to the military role which can be recast into their civilian role. The bill, as written, has the potential to create an Agency with the most desirable attributes of DARPA, but it does not insure it. The nature of the resulting ACTA will still depend in large measure on the individuals who are selected to create it.

I would now like to address the military/civilian duality between DARPA and ACTA:

1. DARPA investments are intended to benefit national security and aid the Department of Defense in carrying out its mission. The notion of technology transfer is central to this role. The rotation of military officers through DARPA for a few years at a time insures that the military services have involvement in the DARPA program and can carry the knowledge gained in the process back to the services to plan for the future. The military services also play a role in helping to formulate and execute DARPA programs.

ACTA investments, I presume, would contribute to our economic growth and stimulate industry to carry out long range technological investments. Reasoning by analogy, I perceive a basic requirement for close cooperation between ACTA and the industrial sector in both planning and executing programs. This can be achieved through a variety of mechanisms such as loan or temporary recruitment of leading industrial personnel and the use of private sector research and development organizations to help formulate and execute ACTA programs.

2. The Department of Defense is sufficiently large that it is able to handle essentially all the procurement requirements of an organization like DARPA. The use of military organizations as agents to both execute contracts and to help in managing both individual contracts and programs provides a natural way to involve other parts of defense in the DARPA program.

ACTA might seek effective participation from the private sector to achieve an equivalent effect on the civilian side. Normal industrial contracts or grants would serve to involve industry in the execution of ACTA programs. The use of private sector research and development organizations to serve as agents for ACTA is an innovative and potentially effective way to augment its program management and contracting functions and to make available to ACTA highly qualified personnel.

3. Defense investments are made to maintain and enhance our national security. Investments in civilian technology should be aimed at stimulating economic growth, improving productivity and generally facilitating our ability to compete more effectively in a global economy. Profitability is one critical measure of our effectiveness on the commercial side. To the extent that long term industrial research efforts resulting from ACTA support are successful by this measure, ACTA (and therefore the U.S. government) should be able to share in the success, perhaps to reduce its outyear funding requirements or, in other ways as might be deemed appropriate.

4. Finally, the call of national security is compelling even at times when individual private sector interests may be at stake. No such overriding concern may exist in a purely civilian endeavor and, on occasion, it may take the direct involvement of the President to provide the necessary leadership for success. One simply cannot assume that actions which are in the long term interests of industry will be taken by them if they conflict with short term interests.

I would now like to turn my attention to those detailed aspects of ACTA which I feel will be essential to its success and to comment on specific aspects of the bill, S. 1233, as reported to the committee.

1. The bill makes no mention of the size of ACTA; it is therefore conceivable that it could become a sizeable organization. This would be a serious mistake in my judgment. To keep ACTA staffed with the very best talent in the country it must remain small. There is simply no way to attract enough talent within current government personnel structure. Even if the existing limitations such as those on pay and post-government activities were substantially relaxed, not enough career paths could be generated to support a large organization of the highest quality personnel.

2. The bill calls for an Advisory Board to provide advice with respect to the policies, programs and activities of ACTA. The members of the Advisory Board are largely to be drawn from industry. Yet the bill restricts the member's organizations from receiving grants, contracts or cooperative agreements with ACTA while they are on the board. This is likely to dissuade most if not all of the best candidates from accepting membership.

Such extreme limitations, while introduced for obvious reasons of fairness and potential conflict of interest, are unnecessary in my view. It would seem that the tasks of the board could be sufficiently arms length from the detailed program management and contractor selections as to make this restriction unnecessary. I believe the potential for unfairness or real conflict is small and can be further minimized by a requirement that ACTA work closely with its agents in monitoring their practices for solicited and unsolicited proposals and invoke normal governmental practices for handling fairness and conflict of interest. In any event, a board member could be recused from specific actions that directly affect his or her firm, institution or entity.

3. Unsolicited proposals for individual efforts and for entire programs are likely to be one important part of the ACTA program. These should be able to be acted upon quickly and directly by ACTA and its agents. Planned competitive programs should be carried out in accordance with normal government competitive procurement standards where proprietary technologies are not involved. ACTA should be given responsibility and latitude to develop innovative procedures for handling competitive procurements in which proprietary technology is involved.

4. The use of private sector research and development organizations as agents for ACTA is an important and, I think, extremely creative aspect of the bill. While the bill does not specify which research and development organizations are intended, it seems clear that some experimentation with, if not dependence upon, qualified private sector research and

development organizations is appropriate. I believe this is the intent of Sec. 124(a)(1) which requires that a research and development organization demonstrate to the Secretary its "significant and substantial experience in technology development and management in the area in which the grant, contract or cooperative agreement is being made." This level of evaluation is appropriate for the purpose of qualifying organizations to act as agents on behalf of ACTA. Individual research efforts such as the agents might handle would be properly subject to the general supervision of ACTA. Under normal circumstances, there would be only a limited role for the Secretary to play in these day to day activities.

5. Finally, the designated funding for ACTA may be appropriate for a developmental stage agency but should be significantly increased as the agency program develops. With a broad range of technology sectors and industries to cover, funds well in excess of a billion dollars may be required annually. Congress should request that ACTA, in consultation with industry and other concerned parties, make an analysis of the anticipated nature of its outyear funding requirements and submit this to the Congress during its second year of operation.

The following specific changes [shown in brackets] to the text of S. 1233 are offered to improve the effectiveness of the bill and to clarify a few ambiguous portions. The majority of comments in my statement are not necessarily appropriate for incorporation in the bill itself, but may be more appropriate for incorporation in the report which accompanies the bill.

Sec. 123. (b)(1)(A) twenty-one members [exclusive of any ex-officio members] appointed ...

Sec. 123. (b)(2)(A)(i) ...advanced technology [and technology] services

Sec. 124. (a)(2) In order to [act as an agent on behalf of ACTA in a given sector of technology], a research and development organization

Sec. 124. (a)(2)(A) ...experience in technology development and management in [its appropriate sector of technology]; and

Sec. 124. (a)(3) ...such individual, officer, or employee [shall recuse himself or herself from any specific actions which involve such firm, institution, or entity.]

Sec. 124 (b) ... of the Agency [with the exception of research and development organizations that have been qualified by the Secretary to act as agents for the Agency.]

Testimony

of

Arden L. Bement, Jr.
Vice President, Technical Resources
TRW Inc.

Before

The Committee on Governmental Affairs
United States Senate
One-Hundredth Congress
Washington, D.C.
June 9, 1987

Mr. Chairman and Members of the Committee:

I am honored to have this opportunity to give testimony on Senate Bill No. 1233: "The Economic Competitiveness, International Trade and Technology Development Act of 1987".

The greater part of my professional experience has been in research and development and the management of technology, therefore, I wish to limit my remarks to the technology provisions of this Bill. Also, I wish to stress that the views I offer do not necessarily represent any position other than my own.

In considering the specific measures of the Bill, I believe three issues have an important bearing. They are,

1. Should technological strength be a national imperative?
2. Is there a need for a national technology policy?
3. Is federally-funded commercial technology in the national interest?

Strength in Technology -- A National Imperative

Technology has become recognized worldwide as a powerful competitive force for economic growth, wealth creation and new job development. Hence, both developing and highly-developed countries alike have increased their national investments in technology because of the broad benefits such investments can bring to the welfare of their societies in general. As a result the U.S. annual fractional contribution to the world's technology base will continue to decline, not because we as a nation are investing less but because the rest of the world is investing considerably more.

No matter how much technology we will control in this new era of growing global interdependency there will always be more technology available elsewhere in the world. Consequently, the risk of becoming "blind-sided" by major foreign technology developments will increase. U.S. industry is responding to this challenge by taking an intensified global view in conducting R&D, gathering information, forecasting technologies, planning markets, developing new businesses, and searching worldwide for lower-cost sources for materials and manufactured products.

The equation of world power is also changing. Japan, which has 40% of the gross national product of the U.S., is weak militarily, and is largely dependent on the rest of the world for raw materials, is now generally considered one of the three more powerful nations in the world, principally due to their share of world markets, control of world financial assets and increasing mastery of commercially important technologies. Japan is now challenging the U.S. for world technological leadership and may succeed before the end of the century. By superior management of the process of integrating R&D with manufacturing and marketing, Japan has set world standards for high-quality, high-reliability and high-value products. They have also demonstrated a superior ability to focus industrial investments in new technologies and markets through government leadership and government-industry cooperation.

The U.S. is facing a future of rising capital costs and inflationary pressures due to growing national debt, trade deficits and declining value of the dollar. Therefore, U.S. industry must be more selective in deciding where and how to compete. Resource flexibility for investing in the early risk-reduction stages of new technology developments for yet undefined and undeveloped markets is shrinking.

An issues is: "Should the Federal government play a role in these "precompetitive" stages of technological development?" The absence of such a role may lead to greater U.S. slippage in the global technological race with serious consequences: (a) a growing trade deficit in high technology products and services, (b) a continuing dependence on off-shore sources for the high-technology products needed to provide our military services with superior weapons, (c) a declining control of high-leverage defense technologies, (d) a growing fraction of our trade deficit representing value added off-shore to our raw materials, and (e) an erosion in our world prestige as a major power. For these and other reasons, I believe the federal government's role in assuring the nation's technological strength is an imperative for the future.

The Need for a National Technology Policy

For more than 4 decades, the report to President Truman by Vannevar Bush and his colleagues, entitled "Science, the Endless Frontier" has had a dramatic effect in defining the federal role in not only supporting but also managing a strong national R&D effort. No other report in the history of America has had so profound an influence on the evolution of national science policy.

Vannevar Bush and his colleagues were convinced after World War II that a strong role by the federal government was justified to support research and development for national security, public welfare and the war against disease. They were also convinced that federally-supported research should be done at universities to assist in preparing the next generation of scientists and engineers. The emergence of national science programs of heroic proportions requiring large organizations, multibillion-dollar capital investments and intensified interactions among scientists from multiple centers in the U.S. and abroad have greatly complicated contemporary science policy. Hence, the earlier notion that the U.S. should be preeminent in every field of science is becoming increasingly naive. Scientific and technological openness rather than arrogance is in our best interest for the future.

Technology policy has received less attention over the past four decades, in part because our technology base was not seriously challenged until the '70s. However de facto technology policies have emerged since the '70s to enhance competitiveness, economic growth and job creation. These policies have had as their primary goal improving the economic climate for technological investment through various incentives to include: (a) tax credits for increased R&D investment; (b) accelerated depreciation schedules for R&D equipment; (c) small business R&D set aside programs; (d) modification of anti-trust laws to permit limited R&D partnerships; (e) assignment of federal intellectual properties to universities and small business firms; and (f) arrangements at national laboratories for industry to use special instrumentation and to conduct proprietary R&D.

While these policies have reduced adversarial barriers between government and industry they have fallen short of direct government-industry partnerships in the development of commercial technologies in the civilian sector. Among new models established to fill this need are the Engineering Research Centers sponsored by the National Science Foundation and the university-industry partnership programs now being funded by over forty states to leverage off the federally-funded university R&D base. These models are yet too new to judge their long-term impact on international competitiveness. Nevertheless these models show high potential for building capabilities in advanced technologies in U.S. industry.

I believe there is a distinction, however, between establishing capabilities in advanced technologies and exploiting these capabilities for competitive advantage. Technology acquired from universities, federal laboratories and other research and development organizations, to include industrial central laboratories and IR&D programs, require considerable refinement and risk reduction before proof of commercial feasibility can be demonstrated.

This risk reduction, if unfocused can involve duplicated efforts throughout an industry during the early stages of market development. Such efforts can be highly wasteful of scarce R&D resources on a national scale. It is during this so-called "precompetitive" stage that the Ministry of International Trade and Industry plays a national leadership role in Japan in shortening the lead time for market entry for advanced technologies.

While such policy development has inherent complications concerning "Who chooses what technologies to invest in?" and "How should the risks and benefits from such investments be shared between government and industry?", the currently operating alternatives are to attack nationally-led, supported and focused programs in Japan and Europe with a broad front of fragmented, sub-scale and duplicative university-industry R&D consortia which address only the earliest stages of demonstrated technical feasibility.

The number of U.S. scientists engaged today in the study of high temperature superconductors, for example, has been able to expand from a base of a few hundreds working in the field prior to discovery to literally thousands due to previous federal investments in superconductivity R&D. In relatively short time the crystal chemistry, properties and theory for this new class of superconductors have become understood, and factual knowledge about this understanding is being shared around the world. However the procedural knowledge (know-how) needed to process these new materials into technologically useful forms and products will take months, even years, to develop.

High-level leadership in both government and industry will be needed during these early development stages to avoid needless fragmentation and duplication among competing U.S. companies if we are to lead the world in early market developments of this revolutionary scientific breakthrough. In some instances antitrust barriers may have to be lowered to permit such cooperation.

The Importance of Federal Investment in Commercial Technology

Among free-world, highly-developed countries the United States stands alone in the high fraction of federally-supported R&D spent for defense, which in 1987 stood at 73.8% (estimated). NSF estimated ratios for non-defense R&D expenditures to gross national product (GNP) for selected countries show these ratios to be approximately 2.5% for West Germany and Japan and 1.9% for the U.S. in 1983. Since that time, federal expenditures for commercial R&D have continued to decline fractionally in the U.S. while Japan has stepped up government investments considerably to strengthen their scientific base at national laboratories and universities.

However, the numbers alone don't tell the whole story. Japan enjoys much greater effectiveness in their R&D investment because of their lower scientific man year costs (due to the lower mean age of their scientists) and more highly focused R&D investments. Furthermore, since the mid-1970s Japan has begun to earn more by selling its technology abroad than it has paid to import technology, a dramatic change from the past.

A substantial amount of our defense capability is dependent on dual-use technologies -- those which serve both our commercial and defense markets. The Defense Science Board (DSB) in their 1986 summer study on the use of commercial components in military equipment identified several examples of commercial products currently used in military systems. These include aircraft, aircraft engines, inertial navigational equipment, ships, vehicles, computers and software, test equipment, precision measurement equipment, and communication equipment. In addition there are a is of changing technologies which also show promise for military use. In the case of integrated circuits the DSB found that the DoD uses about 8% of the total semiconductor market (in dollars) or just 1 or 2% in units. In many cases the chips and their production processes are identical; only the documentation, packaging and testing are different.

Commercial advances in dual-use technologies have occurred very rapidly over the past decade in foreign countries, notably Japan. Japan has assumed a world leadership position in some of the advanced materials (ceramics, high-purity semiconductors, synthetic fibers, optical and magnetic materials), sensors, high-density memory chips, optoelectronic circuits and processing instrumentation that have high importance to the production of U.S. military equipment. Hence, concern is intensifying in our growing off-shore dependency for these and other critical dual-use technologies.

Because of extended life cycles for military equipment, commercial equipment will often reflect more modern technology. Furthermore, a broad commercial production base is often necessary to support the manufacture of relatively low-volume military equipment at reasonable cost. Hence, both product and manufacturing technologies commonly transfer from the commercial to the defense industrial base. Although, the reverse is also true, this two-way street in the flow of commercial and defense technologies is often overlooked in justifying defense R&D investments.

The referenced DSB study showed that considerable cost savings and reduction in lead times could be realized through the greater use of commercial components in military equipment. This point was stressed earlier in the recommendations of the Packard Commission for defense acquisition. The Commission's recommendations are receiving high interest in both the Congress and the Department of Defense.

For integrated circuits, and potentially elsewhere, the greater shift to commercial components in the interest of cost savings will probably reduce the number of these devices which currently require final on-shore assembly. The DSB estimates this reduction in requirement from about 25% of DoD needs today to about 5% of DoD needs by 1990. Such a reduction will further increase our off-shore dependency.

The recent request by the U.S. semiconductor industry for government funding for SEMATECH seeks to reverse this growing off-shore dependency for defense applications; however the greater need is to achieve a viable and competitive U.S. industrial capability for manufacturing the next generation of high-tech, low-volume specialized microelectronic circuits.

The emerging policies concerning federal funding of SEMATECH will set patterns for future government technology policies. One of the critical issues is "What does the federal government bring to the table besides money and long-term purchase guarantees?" In the lobbying efforts over SEMATECH there has been a fervent interest in DoD participation because of "deep pockets" and the presence of an in-place program management structure for fast response. I believe that the time has come to rebalance department roles for developing commercial technologies in the civilian sector rather than to perpetuate current imbalances in the interest of expediency.

The foremost consideration is to arrest the continuing displacement of dual-use technologies off-shore. I believe this can best be done by intensifying federal attention to policies that will strengthen the commercial leg of these dual-use technologies in the U.S. and which will stimulate technology flow from the commercial to the defense sector in ways that will reduce defense R&D expenditures and overall defense costs.

Comments on the Bill

The provisions of Senate Bill No. 1233 addresses my three concerns outlined above; namely they aim at (1) strengthening the nation's technology base for competitive advantage, (2) improving the potential for evolving a federal technology policy and (3) restoring balance to investments in commercial technologies.

The establishment of the office of the Under Secretary for Technology has several desirable advantages:

a) Providing high-level executive leadership in rebuilding federal support for commercial technology.

b) Strengthening focus and coordination of technology policy impacts on trade, economic, security and foreign policies in inter-departmental councils.

c) Improving coordinated management of the major technology elements of the department (other than NOAA).

d) Enhancing the potential to attract top technology management talent from industry.

The Advanced Civilian Technology Agency could provide an important counterpart for commercial technology that the Defense Advanced Projects Agency currently provides for defense technology; namely investing in high-risk, high-return concepts and prototypes. However the roles and responsibilities of ACTA's program managers must be carefully defined to address the following challenges:

a) What will be the relative roles of the private sector and ACTA management in selecting and developing programs?

b) What flexibility will ACTA program managers have in qualifying and selecting R&D operations to implement programs?

c) What accountability standards must program managers meet for returns on investments?

d) How do programs get successfully transferred to the private sector?

e) How and when should programs be terminated to allow competitive forces to operate most effectively?

f) How do you assure sufficient program turnover to keep ACTA dynamic and assure the availability of resources to test new concepts and scale up promising opportunities?

The growing importance of U.S. scientists and engineers to scan foreign technology developments also needs special attention. The Under Secretary for Technology should be given the special role of greatly strengthening the nation's ability to gather, assess, disseminate and assimilate foreign information. Means that deserve consideration include:

a) Establishing international assessment centers (ITACS) at R&D operations to both define requirements for data research and incorporate foreign information in timely technology reviews.

b) Strike a better balance in the use of NTIS resources for foreign technology information acquisitions.

c) Boost resources for foreign information translation and evaluation.

However, effective awareness of foreign technology developments cannot be achieved through documents alone. There is a need for more international conferences and trade fairs to highlight technological advances. Also there is a need for increased interactive networking between U.S. and foreign scientists and engineers. Innovative uses of government and industry listening posts in foreign countries should be explored to increase these interactions.

Hopefully the strengthened technology role of the proposed Department of Industry and Technology will lead to a better recognition of the critical role of the National Bureau of Standards in U.S. productivity and competitiveness. The application of measurement science to basic measurement standards and evaluated data is at the heart of the nation's ability to produce high-quality, highly-reliable products. With the rapid acceleration in new technologies, the NBS will have an expanding challenge to make near-term impacts on innovation, productivity growth and international competitiveness for proprietary applications of these emerging technologies. Hence the role of NBS should stand at the center of government technological policies for international competitiveness.

In conclusion, I see considerable merit in your proposed bill and believe if enacted it could provide a critically-needed boost to the application rate of advanced technologies, improvments in our international competitiveness, and a strengthening of our international trade.

Thank you.

PREPARED STATEMENT OF DR. CRAIG I. FIELDS

Mr. Chairman and members of the Committee, thank you for the opportunity to meet with you in these hearings on trade. I understand that among other things, you are considering a proposal to establish an Advanced Civilian Technology Agency or ACTA. I also understand that it is planned to have much in common with the Defense Advanced Research Projects Agency, DARPA, where I have worked since 1974. As background for your consideration of the creation of ACTA, I would like to describe what DARPA does and how it achieves success.

When the Soviet Union launched the satellite Sputnik in late 1957, the Congress reacted decisively in many ways, including establishing the Advanced Research Projects Agency (ARPA) by early 1958. The Agency, later renamed DARPA, was to pursue high risk, high impact research and development projects to assure that the United States would never be technologically surprised. ARPA was termed "a Manhattan Project for space" and rapidly proceeded to develop and demonstrate technology to catch up and then to quickly surpass the Russians in space. ARPA supported the early technology of TIROS, the first weather satellite. It also supported NOTUS, Courier and SCORE, the earliest communications satellites, that were used to carry an address to the nation by then President Eisenhower. Other efforts included TRANSIT, the earliest navigation satellite; SAMOS, the first surveillance satellite; and VANGUARD, EXPLORER and SATURN rockets.

ARPA ran a major ABM research program called DEFENDER which shared some of the same challenges now facing the SDI. In fact, when the SDI was established, those parts of DARPA concerned with directed energy weapons were transferred to provide a kernel for the new organization. From the early 1960s, ARPA has been responsible for many of the technology developments that support the detection and measurement of nuclear tests world-wide. These techniques are essential to the verification of all test ban treaties. DARPA placed the current active seismic arrays in China and Norway.

ARPA has also played a central role in the development of the so-called dual use technology base, supporting both national defense and economic strength. Our computer technology program, begun in 1961, is the largest in the world, and has been responsible for many of the major developments in that field. These include computer timesharing, computer graphics, packet-switched computer communications like the ARPANET, computer-based instructional technology, the entire field of artificial intelligence or AI, many of the central developments of office automation technology, the latest low bandwidth teleconferencing technology and multiprocessor supercomputers. This latter led a few weeks ago to the announcement of the fastest supercomputer in the world, the Connection Machine-2. This machine was developed as part of our Strategic Computing Program, a national effort begun in 1983.

In the area of materials science, our support of the 12 Materials Science Laboratories in the 1960s established that discipline as distinct from physics or chemistry, and we continue to have a very strong program in metal alloys, microelectronics materials, ceramics including the latest ceramic high temperature superconductors, composites, polymers, and biotechnology. Our advanced materials have found their way into automobile drive shafts and springs; tennis rackets and golf clubs, prosthetic implants; diesel engine piston liners and automobile engine valve seats; electronic ceramics; high efficiency electric motors and power transformers.

For universities we are a major source of academic support, particularly in the areas of computer science and materials science. In addition, as a result of the recent Packard Commission report on defense acquisition, our charter has been enlarged to include prototyping of critical projects.

DARPA funds innovative technical ideas and bridges the gap between an initial insight and the development of a technology base or product. Our funding takes the form of limited duration investment programs that begin with an unproven but credible idea and end with technical success - or failure. The latter is very important: our program managers are given the opportunity to take prudent chances and sometimes make mistakes, as long as they are aiming at a revolutionary advance rather than an evolutionary improvement. Sometimes those ideas come from small, start-up companies and sometimes they come from within a well established large companies. Sometimes they are generated by DARPA personnel. In any case, we assemble an industry or industry-university team to perform the work. In some cases there is cost sharing, while in other cases DARPA pays the entire bill. Sometimes we jointly fund the effort with another part of the Government, if such a partnership is mutually beneficial.

In supporting such work we respect the proprietary nature of the information, and support patent rights, within the guidelines of Government and DoD procurement regulations. We also encourage licensing arrangements through which a number of companies can exploit the new technology. In doing so we try to balance a reward for initial invention with the stability of multiple sources for products. In all cases we encourage private investment to follow our initial high risk expenditure.

Sometimes we fund developments to solve a problem, where there is a clear need and a clear market. Other times we seek to create a market for a new technology, and we can open up new and unforeseen opportunities.

DARPA's success is dependent on three factors: the environment within which we operate; the personnel we hire; and the procedures we follow. Our environment is very supportive. I believe we have good relations with the Congress and we get excellent support from the Secretary of Defense. We are adequately funded, although we always have more good ideas than money. We are not micromanaged by our bosses, and they support us when there are the inevitable controversies about the development and transfer of new technology.

The DARPA staff is unique. The program managers are respected scientists and engineers and many have made important contributions to their fields. They are also entrepreneurs: they are very strongly motivated, they work hard, and sometimes it seems as if they will let nothing stand between them and success. They come to DARPA from industry, universities and elsewhere in the Government, but almost without exception they leave DARPA after a few years for very high level jobs in defense industry. They do not come to DARPA for the salary. They come because they can have the satisfaction of getting something done, and getting recognition for their achievement. The program managers are decision makers within our organization, and typically are responsible for multi-million dollar programs.

DARPA is the only place I know where every year there is less bureaucracy than the last. We require almost no paperwork in order to get things done, and a very short approval cycle involving two or three people in order to begin major efforts. Thanks to the use of Broad Agency Announcements, we have significantly shortened the time it takes to let contracts. DARPA is a very flat organization - the chain of command from the bottom to the top is three people. Since it is a small organization with only 75 scientists and engineers, everyone talks with everyone else. The staff does not worry about getting promoted, since essentially no one gets promoted - there is no place to go. All of the grades are high and almost everyone makes the same salary.

All in all DARPA is a very attractive place to work, and one of the few parts of the Government where the employees have been accused of being overpaid since they have such satisfying jobs. I know of no DARPA employee who has ever left the Agency for a more enjoyable job, although all go to much more lucrative jobs.

That completes my summary of DARPA's purpose, its method of operation, and its products. I'd be pleased to answer your questions.

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Dear Senator Glenn,

I have read your proposed legislation S. 1233 to establish a Department of Industry and Technology (DIT) with great interest. As a former Director of the National Bureau of Standards, this proposal would bring a most welcome emphasis on technology to the Department of Commerce, which has long been ambivalent about its scientific and technological role.

I am sorry that I plan to be out of the country during your hearings on this measure, for I would like to have spoken in support of its objectives.

I note an interesting contrast between your proposal and the proposal two years ago to change the Department of Commerce into a Department of Trade and Industry (DITI). This measure, which received administration endorsement, if not active support, would have shorn the department of all its technical activities, and added to its trade responsibilities. Your measure, it seems to me, accomplishes the same purpose of coordinating trade policy while strengthening the concerns for civil technology and the capabilities for addressing them.

The President's competitiveness initiative features the National Science Foundation's contribution to innovation, to joint industry-university research, to engineering research and to education. This is very welcome; universities have a major contribution to make to the technical performance of our economy. But it is very likely that pressures will grow for the NSF to extend itself into areas of industry-specific technology and engineering for which it is not intended, and which divert it from its prime mission for fundamental research.

The activities under the Undersecretary for Technology could provide an industrially oriented counterbalance to the NSF, allowing the two areas to developed through management arrangements suitable to their purpose. But to be successful, the DIT must develop programs as attractive to industry as are the collaborations with universities supported by NSF (and by the Basic Research Tax Credit).

My primary suggestion for possible modification of the proposal is to give explicit recognition to the value of investments in engineering education and technical training as the best means for addressing many areas in which industry, especially small and mid-sized industry need help. Often this work is best done in conjunction with research or development of generic technologies (such as quality assurance in production, engineering design and simulation, and computer integrated manufacturing). Not only are such programs valuable, their are also welcomed by industry as helpful without distorting competitive positions or second guessing market judgements.

This need not involve any duplication of the NSF's activities. There are areas of engineering - especially the "downstream" activities that follow R&D: design, manufacturing, quality control and testing - that cannot be properly supported by NSF. There are engineering institutions with strong pragmatic traditions and links to industry that would make excellent partners for the DIT. The DIT program could restore balance in the Federal government's non-military science and engineering activities that is badly needed.

Second, I would suggest some explicit recognition of the initiatives being taken in many states to upgrade their economics through education reform, high-tech research, and policies to provide attractive climates for business investment. Partnerships with the states not only multiply the federal effort, but respond to and reward local initiative, where education, research and capital investment are often better coordinated that at the federal level.

Finally, let me note that your proposal, to be effective, will have to be implemented by a team of executives who are not only qualified but are enthusiastic about the technology mission they are given. I see little sign that this is true today. Perhaps 1988 will bring new opportunities.

Sincerely,

June 1, 1987

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June 8, 1987

The Honorable
John Glenn
Chairman
Committee on Governmental Affairs
United States Senate
Washington, D.C. 20510

Re: S. 1233 -- A Bill to Establish an Executive Department of Industry and Technology and a United States Trade Administration, Etc.

Dear Mr. Chairman:

I am writing at the suggestion of your Committee staff to convey my views on your bill, S. 1233, to establish a U.S. Department of Industry and Technology, and a U.S. Trade Administration, among other purposes. I regret that I will be unable to testify at your Committee's hearings since I will be out of town.

S. 1233 has some benefits, and some problems. I will describe each, and will suggest some possible changes which would help alleviate some of the problems.

I. Benefits of S. 1233

A. Focusing Responsibility on Competitiveness Functions

The bill would make a significant contribution to the organization of our government, and potentially to the strength of our economy, by establishing a group of high-level officials whose sole concern would be with assisting -- in ways appropriate to government -- U.S. industries to achieve optimal competitiveness in international markets. The Secretary and other officials of the Department of Industry and Technology would know that their success in their government positions will be judged by how effectively they contribute to this important goal. At present, to the extent this task is carried out, responsibility for it is dispersed at fairly low levels, so it does not receive the visibility, energy, and resources needed for an effective job.

There are a variety of useful and important ways the Federal Government can contribute to U.S. industrial competitiveness.

They include:

- Analyzing and advising the President on proposed laws and programs of the Federal Government; advising the President and the Congress when such programs impede U.S. competitiveness; and seeking to devise policies and programs which would enhance competitiveness in a way consistent with our notions of the proper role of the U.S. Government and with U.S. international trading rules.

- Closely observing and analyzing the factors affecting the health of specific U.S. industries, with a view to helping policy makers in government, business, and the nonprofit sector to be aware of technological, political, and economic developments at home and abroad which may create problems or opportunities for U.S. industries.

- Maintaining close and continuing communication with executives and officials in industries, government, nonprofit institutions, and others who have a common interest in building competitiveness of U.S. industries, so that it will be easier for them to work together in mobilizing all our national resources for effective competition.

- Improve the incentives and opportunities for U.S. industries to develop new technologies and rapidly incorporate them in commercial products, so that U.S. enterprises and workers reap the long-term economic benefits of new technological advances -- many of which originate in United States public and private research institutions.

Your bill properly recognizes that it no longer makes sense to distinguish in our government organization or policies between domestic and foreign commerce; that a serious shortcoming in the U.S. economic system has been its slowness in reducing new technological breakthroughs to commercial application; and that the bright lines we draw in the United States between government and business, business and labor, and profit and nonprofit[1] organizations, thcugh valuable for important public policy objectives, have raised impediments to prompt and effective responses to global competitive challenges.

The bill also sensibly recognizes that the large amount of economic data collected by the Department of Commerce on industrial sectors in the U.S. and abroad need to be more effectively organized and deployed. It is important that the information reports made available by the Department to government officials and business executives integrate statistical information on past events (such as production, consumption, exports, imports, etc.) with information relevant to future possibilities (such as conditions affecting access to foreign markets, activities of other governments in support of their own industries, activities of other industries, new technological developments, etc.). The reorganization this bill contemplates would make it easier to accomplish this competition-oriented approach to collecting and organizing business information.

---

[1] In this connection, I believe Sections 101(4) and 113(7) of S. 1233 would be improved if they referred not just to joint efforts of "business, labor, and all levels of government," but also to the nonprofit sector. Our universities and other nonprofit research institutions constitute an enormous competitive resource unmatched in any other country in the world. Our challenge is to make effective use of this resource in enhancing the strength of U.S. industries.

B. Centralizing Responsibility For Trade Functions

S. 1233 also takes a worthwhile step toward combining in one government agency, under one official, responsibility for U.S. trade policy and trade negotiations.

A very serious problem with our present organization is the overlap and confusion between the activities of the U.S. Trade Representative and the Secretary of Commerce resulting from the fact that the division of their functions is not clearly defined. The Trade Representative has the leading role in coordinating policy formation, and the Secretary is responsible for implementing trade policies and programs. But in practice it is very often impossible to distinguish between policy making and implementation. Staff members are confused. Neither the Trade Representative nor the Secretary enjoys a clear mandate to speak and to act as the Administration's top representative on trade issues. Our government is weakened in formulating policy and in dealing with outsiders.

The proposed legislation would transfer the present trade negotiation functions of USTR and the various functions of the Commerce Department relating to trade administration and trade policy to a new U.S. Trade Administration. As I read it, S. 1233 would leave the U.S. and Foreign Commercial Service, the Industry Sector Advisory Committees, and the President's Export Council, under the supervision of the Department of Industry and Technology. Those functions are closely enough related to the development and implementation of trade policy that problems might result from having them in a different department from that which has responsibility for trade policy. You might wish to consider including them in the responsibilities of the U.S. Trade Administration.

II. Problems in the Proposed Legislation

I perceive several problems in the organization contemplated by S. 1233. The problems result largely from the fact that the bill separates in different agencies the responsibility for trade policy and competitiveness.

1. There is a danger that the new Department of Industry and Technology will lack the effective bureaucratic power it will need to play a major role in Executive Branch decisionmaking, and in interactions with Congress on a wide array of competitiveness issues

The new department will not have regulatory power, major spending power or other power to control immediate decisions of the sort that occupy government officials, legislators, and the media on a day-to-day basis in Washington. This fact is good in the sense that the important functions S. 1233 vests in the new Department of Industry and Technology require patient long-range attention. However, without the power to influence day-to-day decisions in some arena, the leaders of the new department may find it difficult to get the attention of other cabinet officers or the President.

Of course, this problem will not exist if the President appoints forceful and knowledgeable leaders in the new Department and provides adequate White House support to the Department's role in Executive Branch policy making. However, experience has shown that these conditions do not always prevail, and the give-and-take among cabinet departments ends up favoring those which have "clout" because of their power to control specific day-to-day decisions.

2. There is also a danger that the decisions in antidumping and countervailing duty cases, which are supposed to be quasi-judicial in nature, will be exposed to excessive policy influence in the new U.S. Trade Administration.

It is presently the perception of many that these decisionmaking functions -- presently carried out in the Commerce Department -- are inadequately shielded from political pressures. If they are placed in the U.S. Trade Administration under the control of the U.S. Trade Representative, there is further danger that the decisions in individual antidumping or countervailing duty cases will be influenced by the trade negotiating objectives and strategies of the Trade Representative. Even if this is not the fact, domestic and foreign parties to the decisions may nonetheless have the perception that the decisions are in effect tools of trade negotiating policy rather than objective decisions based on impartial fact finding and application of neutral legal standards.

It is not necessarily impossible to combine the trade negotiating functions in one department with the decisionmaking of antidumping and countervailing duty cases. However, if that is done, each of these functions should be under a separate high-level official of approximately equal status, and each of them in turn should report to a higher official who would have responsibility for keeping the functions separate. S. 1233 puts both functions under the U.S. Trade Representative, and creates a rather strong likelihood that the supposedly quasi-judicial decisions will be used either to punish or to reward trading partners in order to accomplish U.S. negotiating objectives.

3. S. 1233 places the entire new U.S. Trade Administration in the Executive Office of the President. This location may make it difficult to retain officials with long experience and detailed professional competence for important positions in trade negotiation, trade policy analysis, and administration of the import relief laws.

Our system has been weak in this regard in the past. There is a strong need to establish a cadre of career government officials concerned with economic matters. To achieve this goal it will be necessary to offer talented young professionals an opportunity -- if they prove their competence -- to pursue a steady career track through varied jobs in international trade positions, leading to high level responsibilities. Such a career service must of course be credible to those who are being invited to commit themselves to it. This credibility will be hard to achieve if the career service is administered by the Executive Office of the President, an Office generally regarded as serving the short-term shifting political goals of the President currently in office, rather than long term policies and programs which must necessarily span more than one presidential era.

Your Committee might wish to consider establishing the new U.S. Trade Administration as an independent agency outside the White House. A small coordinating office could be maintained in the White House to function, in a fashion analogous to the National Security Council, to ensure that the input of different departments and agencies on trade policy issues is obtained and that disputes are effectively resolved. This coordinating office would not need to displace the functions of the U.S. Trade Representative in supervising the formulation and administration of trade policy.

* * *

I am much impressed by the careful work your committee staff has done in shaping and defining the proposed Department of Industry and Technology. If effectively staffed and administered that Department would make a very important contribution to improving our nation's position in the world economy.

In my view, the technology and industry functions and the trade functions would be more effectively carried out, and the problems cited above would in large part be avoided, if the two agencies were combined -- either in a cabinet department or an independent administration outside the Executive Office of the President.

I will be happy to discuss these subjects with you further.

Sincerely yours,

Robert Herzstein

Robert Herzstein

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Congressional
and Intergovernmental Affairs
Washington D.C. 20230

June 19, 1987

Honorable John H. Glenn
United States Senate
Washington, D.C. 20510

Dear Senator Glenn:

The United States, leader in technological innovations today, expects to maintain that position in the year 2000 and beyond.

The Department of Commerce plays a key role in keeping our country in the forefront of progress in technological innovation. To assure that we retain this leadership role, Deputy Secretary Clarence J. Brown has assembled a group of technical experts and top officials from the Commerce Department to present a report on the latest scientific and technological advancements, as well as the outlook on barriers standing in the way of their commercialization and steps to remove those obstacles.

The findings of this report may be the blue print for America's leadership role in the 21st century. You are cordially invited to attend a briefing on Friday, June 26 at 11 a.m. in room 253 Russell Building conducted by Deputy Secretary Brown and Dr. Ernest Ambler, Director of the National Bureau of Standards. If you have any questions, please call Michael Lawrence of our Congressional Affairs staff at 377-3663.

We look forward to seeing you at the briefing.

Sincerely,

Gerald McKiernan
Gerald J. McKiernan
Deputy Assistant Secretary
for Congressional Affairs

Enclosure

FINAL REPORT

THE STATUS OF EMERGING TECHNOLOGIES:

AN ECONOMIC/TECHNOLOGICAL ASSESSMENT TO THE YEAR 2000

The Department of Commerce has concluded, in a review of emerging technologies and their future impact on the economy, that American businesses lag behind many of their foreign competitors, especially the Japanese, in exploiting technological breakthroughs.

The review was ordered by Deputy Secretary Clarence J. Brown in April 1986 to identify the new technologies that will lead to new products or processes, analyze their commercialization, and recommend means of reducing the barriers. It is based on an assessment by technical experts and agency heads within the Department. They studied scientific and industrial plans and the commercialization process here and abroad.

Once the list of technologies was determined, the experts determined their probable contribution to the gross national product by the year 2000. While recognizing this as an imprecise measure requiring some subjective forecasting, the Department believes it to be the best proxy to judge economic impact. Although the technologies are ranked in terms of high, moderate or low impact, the terms are relative; all are expected to play a significant role in future growth.

Identifying the technological opportunities and their probable economic effect is not difficult. The real problem facing U.S. companies is converting these opportunities into real economic success. The review's primary focus is upon identifying ten barriers to commercialization and making recommendations for overcoming them. The recommendations require action by all sectors of American life, sometimes unilaterally and occasionally together.

The barriers to commercialization are also ranked in order of importance. The two most important are inadequate tax incentives and the high cost of capital. The remaining barriers include two that require actions by individual companies. The Department found that there is a lack of integration and communication among functions within companies, and it also cites companies for being too complacent and dependent on the domestic market for growth opportunities.

The recommendations include fostering participative management by employees, training managers in the production process, eliminating provisions in foreign tax laws that discriminate against U.S. products, and updating business school curricula. They also reiterate recommendations of President Reagan's competitiveness initiative, such as those regarding improving export controls, reforming product liability and tort laws, and lifting antitrust restrictions.

Since the list of technologies was determined, there have been significant and highly publicized breakthroughs in the field of superconductors -- materials that have zero electrical resistance. Several developments must be achieved before their economic potential can be realized, particularly an improvement in the current-carrying capacity of these materials. Until it is known whether this is possible, superconductors should be considered a potential emerging technology.

The accompanying appendices describe in detail the technologies, barriers, and recommendations.

APPENDICES

APPENDIX A - DESCRIPTIVE TABLES

Table 1 - Emerging Technologies (4 pages)

Table 2 - Emerging Technologies Ranked by Economic Impact

Table 3 - Generic Barriers to Achieving Maximum Benefits from Emerging Technologies

APPENDIX B - DETAILED DESCRIPTIONS OF BARRIERS

APPENDIX C - RECOMMENDATIONS OF METHODS TO OVERCOME BARRIERS

Table 1

EMERGING TECHNOLOGIES

Technology	What does it do new or better?	Applied to what products or processes?	Used by What Major Industries?
1. Advanced Materials			
A. Ceramics	Better high temperature strength-to-weight properties	Heat engine components, turbine blades, heat shields	Automotive & aircraft engines
(high performance structural and electronic ceramics)	Better dielectric & optical properties	Electronic substrates, integrated optics	Electronic components
B. Polymer Composites	Higher strength-to-weight ratio	Structural components	Aerospace, automotive, ind. const.
(high strength fiber reinforced plastic resin)	Design flexibility because of spatial asymmetry	Structural components	Aerospace, automotive, ind. const.
C. Metals	Improved strength & high-temp performance	Structural components Super conducting components	Manufactured components
(rapid solidification, & metal matrix composites)	Improved magnetic properties	Electro-magnetic equipment	Electrical machinery
2. Electronics			
A. Advanced Microelectronics	Improved performance in speed, size	Semiconductor devices	Electronic & optical components & systems
(enhanced VLSI and VHSIC chips)	Improved magnetic properties	Information storage	Information processing
	Higher efficiency photovoltaic conversion	Solar cells	Energy generation

Technology	What does it do new or better?	Applied to what products or processes?	Used by What Major Industries?
B. Optoelectronics (optical fiber and light wave processing)	Improved performance in speed, size, capacity, and security	Electronic equipment, information processing	Communications & computers
	Higher density information storage	Computer systems of all sizes	Computers
C. Millimeter Wave Technology	When replacing radio systems it frees RF spectrum for other uses	Voice & data communication systems	Telecommunications carriers & corporate use for private circuits
3. Automation			
A. Manufacturing (computer integrated and flexible systems)	Flexible reconfiguration of production processes Integrated control of all production operations	All manufacturing processes	All manufacturing
B. Business and Office Systems (computer applications within an organization)	Efficient information storage, retrieval, & exchange	Networking, word processing, & data base management	All organizations
C. Technical Services (computer applications in the provision of commercial services)	Efficient high-volume information storage, retrieval & exchange	Information retrieval and distribution, data base management, education and training	Financial services, electronic mail, telecommunications, professional service

Technology	What does it do new or better?	Applied to what products or processes?	Used by What Major Industries?
4. Biotechnology			
A. Genetic Engineering	Improved diagnostic and therapeutic drugs	Health Services	Medicine, Pharmaceuticals
(design & production of highly selective agents)	Improved plants, pesticides, & animal supplements	Foods and pesticides	Agriculture Food processing
	Neutralize pollutants	Environmental control processes	Chemical manufacturing & treatment
B. Biochemical Processing	Improved control of chemical processes, outputs, and yields	Chemical separations and reactions, biosensors	Chemical manufacturing
5. Computing			
A. Computing Equipment	Faster, lower-cost computing	Information processing and computer control	Potentially all.
(supercomputers, parallel processing, computer arch.)			
B. Artificial Intelligence Techniques	Improved computer replication of human judgment	Information processing and computer control	All applications using computers
(includes expert systems, natural language, and robotic control)			

Technology	What does it do new or better?	Applied to what products or processes?	Used by What Major Industries?
6. Medical Technology			
A. Drugs (other drugs are included in category 4 - Biotechnology)	Improved immunology and treatment	Health Services	Medicine, Pharmaceuticals
B. Instruments & Devices	Improved diagnostic and therapeutic systems	Magnetic Resonance Imaging & CAT scanning, radiation treatment	Medicine
7. Thin Layer Technology (semiconductor applications also are included in Electronics)			
A. Surfaces & Interfaces	Improved control and yield of chemical reactions	Chemical catalysis	Chemical manufacturing, food processing
	New electronic & optical properties	Semiconductor devices, surface modification and coatings	Electronic components, computers
B. Membranes	New chemical properties, better chemical separation techniques	Chemical separations	Chemical manufacturing, food processing

Table 2

EMERGING TECHNOLOGIES RANKED BY ECONOMIC IMPACT

Group A	(Highest)	Advanced Materials; Composites
		Biotechnology; Genetic Engineering
		Electronics; Optoelectronics
		Electronics; Advanced Microelectronics
		Computing; Computing equipment
		Automation; Manufacturing
Group B		Automation; Business and Office Systems
		Biotechnology; Biochemical Processing
		Medical Technology; Drugs
		Advanced Materials; Ceramics
		Automation; Technical Services
		Computing; Artificial Intelligence Tech.
		Medical Technology; Devices
Group C		Thin Layer Technology; Membranes
		Advanced Materials; Metals
		Thin Layer Tech.; Surfaces & Interfaces
		Electronics; Millimeter Wave Technology

Table 3

GENERIC BARRIERS TO ACHIEVING MAXIMUM ECONOMIC BENEFITS FROM EMERGING TECHNOLOGIES

1. High costs of capital funds in the U.S. relative to foreign competitors.

2. Tax incentives for U.S. companies relative to foreign competitors to deploy emerging technologies (including the stability of tax regulations).

3. Poor integration of manufacturing, design, and R&D functions.

4. Inadequate laws, regulations, and enforcement protecting intellectual property rights in the U.S. or overseas.

5. Complacency and dependence on the domestic market.

6. Restrictive trade policies in foreign markets.

7. Federal or State regulations on corporate activities intended to protect the public health and safety (e.g., building codes, environmental laws, drug approval regulations, and occupational health regulations).

8. Export controls on advanced technologies and high-technology products.

9. Restraints and uncertainty caused by product liability and tort laws.

10. Anti-trust restrictions against cooperative ventures for marketing or production methods. There may still be perceived barriers against cooperative R&D, but legal restrictions against procompetitive R&D were eased by legislation in 1984.

APPENDIX B

DETAILED DESCRIPTIONS OF GENERIC BARRIERS TO ACHIEVING MAXIMUM ECONOMIC BENEFITS FROM EMERGING TECHNOLOGIES

1. High costs of capital funds in the U.S. relative to foreign competitors.

Higher interest rates, lower debt-equity ratios, cultural practices, and tax laws combine to make the effective cost of capital funds for U.S. firms up to twice as high as their Japanese competitors. For example, U.S. savings rates, as a percentage of GNP, have historically been, and continue to be, among the lowest of developed countries (and about half that of Japan). Recent declines in the value of the dollar relative to foreign currencies have reduced some capital cost differentials, but the above factors combine to keep that differential high.

2. Tax incentives for U.S. companies relative to foreign competitors to deploy emerging technologies (including the stability of tax regulations).

Foreign countries continue to employ a variety of incentives to encourage the growth of new technologies. These range from subsidies for the conduct of R&D to import protection of the products derived from the new technologies, at least in their early marketing stages. U.S. firms receive few such subsidies. Some predict that recent changes in the tax law will have a stultifying effect upon venture capital, thus denying U.S. firms access to a previously major source of funding for new high-technology firms.

Frequent changes have made it difficult for U.S. businessmen. Drafting of regulations often lag behind legislation significantly. These changes and delays have created an air of uncertainty in business planning: uncertainty is always an anathema to the businessman.

3. Poor integration of manufacturing, design, and R&D functions.

For rapid movement of new technologies through the functions of R&D, design, product development, and production, it is necessary to have effective communication among these functions. Lack of willingness and opportunity of key technical staff to move with the emerging technology from R&D into manufacturing, for example, has been common in U.S.

organizations, although much improvement has occurred in recent years. A contributing factor in the U.S. has been the lower status, reflected in lower salaries and recognition, given to manufacturing relative to other branches of engineering.

Lack of cooperation and integration among institutions in the U.S. is just as important a barrier as among functions within a firm. For example, more rapid application of new technologies could be the result of closer coupling of firms to technical activities in Universities and Federal laboratories, and from intercompany cooperation to jointly address generic or structural technical problems of a longer-term nature. In this category would fall the classic Government research (carried out by NBS, NOAA, and NTIA) to provide technical data and standards that industry needs to design reliable new products/processes, but single firms do not have the incentive, expertise, or funds to develop themselves.

The Japanese are said to be particularly strong in integrating functions; this may partly account for the rapid speed with which their firms introduce new products into the market. Rotation of staff among these functions in Japan also helps this integration process.

4. Inadequate laws, regulations, and enforcement protecting intellectual property rights in the U.S. or overseas.

U.S. businesses rely upon strong intellectual property protection to realize the benefits of emerging technologies. In fact, the rate of development of emerging technologies may well depend upon patents as incentives and security for R&D or marketing investment, and upon trademarks to build and protect reputations for quality. Barriers exist where laws, regulations or enforcement procedures are inadequate. When innovation is neither rewarded nor encouraged, markets are either forfeited, left untapped, or are underdeveloped. Examples of domestic barriers include (1) the inadequacy of the statutory 17-year patent term for certain agricultural and pharmaceutical products which are subject to extensive premarket testing, and (2) the absence of effective protection for process patent holders against imports of products made abroad under the patented process.

On the international front, it is well recognized that many countries do not offer adequate intellectual property protection and, in some cases, actually sanction abuse of intellectual property rights. This would include, for example, a nation's outright appropriation of foreign-owned technologies or of creative and artistic works. This robs the inventor or creator and, of course, the associated business concern of any possibilities of realization of world market potential.

5. Complacency and Dependance on the Domestic Market

This barrier encompasses the attitudinal problems generated by the size and ready availability of the U.S. market for new products and services -- the lack of an immediately apparent need to compete with Japan and other countries head-to-head in the international marketplace. American companies, separately and in joint ventures, must aggressively seek export opportunities abroad and anticipate challenges in the U.S. from new foreign competitors. This barrier also encompasses the attitudinal differences toward "risk taking" between U.S. and Japanese firms and the cultural differences in approaches to production and marketing. The Japanese preference is to produce and market technological improvements in small increments, thereby gaining a foothold and experience in the marketplace. The U.S. approach is to complete as much research and development as possible before producing and marketing a new product which "leapfrogs" existing technology.

6. Restrictive Trade Policies in Foreign Markets

Restrictive trade policies take many forms -- laws, regulations and practices -- with an overriding consequence of protecting a home market from foreign products. Although most of these policies are sponsored by governments, business practices and social mores may also act as significant trade barriers.

Direct Government Practices are one type of policy affecting trade. Included here are:

- Tariffs and other import duties designed to protect a domestic market rather than to raise revenues.
- Import licensing designed to create uncertainty, delays, and discrimination for foreign products.
- Government procurement (i.e., buy national products)
- Product development and export subsidies programs.

Indirect Government Practices are a second type of policy. Included here are:

- Standards codes, testing, labeling, and certification requirements which interfere with market availability and acceptance of foreign products.
- Local or domestic content (e.g. rules or origin)

requirements on foreign products which adversely affect technology and process innovations.

- Market reserve policies that designate certain markets for domestic products only.
- Disregard of intellectual property rights by foreign governments which undermine the ability to exploit markets with new products.

Non-trade and Non-government Measures and Practices are a third type. Included here are:

- Public health and safety laws that indirectly restrict the importation of foreign products.
- Local and national distribution systems that discriminate against foreign products through interlocking relationships among manufacturers, wholesalers, and financial institutions.

7. Federal or State regulations on corporate activities intended to protect the public health and safety (e.g., building codes, environmental laws, occupational health regulations, and drug approvals).

Emerging technologies generally require, somewhere in their development and production, some form of environmental and/or health clearance or regulation. This will occur on the Federal or State levels depending on which of the Federal regulation(s) apply.

Those technologies involving large-scale use of new materials, particularly in the broader electronics categories, will have to continue to meet the existing water, air and disposal requirements. In the case of new and exotic materials, such as the new semiconductor compounds (e.g. Gallium Arsenide), OSHA regulations are constantly being revised to protect against potential hazards, while EPA has control of various emissions through clean air and clean water legislation.

Solid waste reclamation also will enter into the cost of using new technologies. Disposal of new composite materials as scrap in products that have reached the end of their useful life, will impose a new set of costs and possible barriers. The present case of what to do with worn-out lead storage batteries is a good example of what might happen to a higher technology material with end-of-cycle toxicity.

For those technologies involved in medical and health care, regulations covering production, product certification, standards, OSHA considerations and disposal add to the burden of time/testing, as well as to the cost of meeting stringent health and environmental standards. The current issues surrounding the regulation and testing of genetically-altered naturally occurring organisms is a prime example of an emerging technology in the early stages of development.

The costs and time delays involved are further exacerbated if competing countries have less stringent certification and environmental requirements. Technologies in those countries are often put into production faster, thus putting U.S. suppliers at a competitive disadvantage. There are several recent examples in the pharmaceutical industry of the effect of these differences.

8. Export controls on advanced technologies and high-technology products.

While the need for control of the export of technology for purposes of U.S. national security has been clearly established, the costs attributable to "over-control" are also now becoming more apparent. That is, the Executive Branch's inability to decontrol goods and technology -- that are no longer strategic or are available from foreign competitors--is now seen as inhibiting our ability to remain technologically superior to our international competitors as well as contributing to the erosion of our defense industrial base . The Department of Commerce is trying to establish interagency procedures that will facilitate the decontrol to take place as Congress intended.

9. Restraints and uncertainty caused by product liability and tort laws.

With increasing frequency, claims are made that innovation and ability to compete are retarded in the U.S. by product liability and tort laws. The resulting uncertainty and instability have brought about a need for reform. Reasons include:

-- A patchwork of 50 different state laws on product liability. Cases based on similar facts, but tried in different states, can produce strikingly different and contradictory results.

-- The enormous transaction costs for all parties involved in litigation.

-- The high costs of insurance for product-liability related protection.

Over the past 20 years our product liability law has moved away from fault as its basic guiding principle. The Commerce Department has taken the position that as a matter of fairness to manufacturers and as an incentive to them to construct new and safe products, businesses should generally be held liable only for behavior based on fault.

10. Anti-trust restrictions against cooperative ventures for marketing or production. There may still be perceived barriers against cooperative R&D, but legal restrictions against procompetitive R&D were eased by legislation in 1984.

Many U.S. anti-trust restrictions have been in place, substantially unchanged, for over 75 years. In these times of strong foreign competition and worldwide markets, U.S. firms are at a disadvantage when compared to foreign firms not subject to such strong, legal strictures. Production economies not envisaged when the original laws were enacted are now possible. These economics permit firms jointly to build and operate facilities at lower cost, thus improving world-competitive positions. Facilities housing flexible automated manufacturing systems are one example, but other shared facilities are also possible. Joint production by large firms, joint marketing of the products, and mergers of such large firms are subject to close scrutiny by U.S. Federal agencies, even though they may increase efficiency. This is viewed as an anachronism, particularly in the light of foreign practice.

Cooperative funding of procompetitive R&D was eased by changes enacted in 1984 which, among other things, reduced damages to be assessed to losses actually incurred. These changes are still not as widely known as they might be, with the result that some cooperative U.S. ventures are not being undertaken in fear of anti-trust prosecution.

APPENDIX C

RECOMMENDATIONS OF METHODS TO OVERCOME BARRIERS

BARRIER: HIGH COST OF CAPITAL IN THE U.S. RELATIVE TO FOREIGN COMPETITORS

Efforts to reduce Federal budget deficits should continue because of negative effects of the high deficits on capital markets and on interest rates.

State and local level efforts to meet local capital needs should be encouraged. The creation of venture capital pools would help increase the availability of capital for the new, high-risk developments that sometimes have very large innovation and competitive payoffs. Investment rebates and other incentives might also be used.

Actions should be taken to increase aggregate savings in the U.S. Additional tax incentives (beyond the recent tax reform), direct appeal to savers, and other actions could increase savers willingness to save rather than consume. Increased savings levels are necessary to help increase capital supply and lower interest rates. The U.S. savings level is much lower than in competitor nations.

BARRIER: TAX INCENTIVES FOR DEVELOPMENT OF NEW TECHNOLOGIES

In order to encourage rapid commercialization of technological advances, any future changes in the tax law should focus on the incentives available for long-term investment in all factors of the production, marketing, and distribution processes. Changes in cost recovery provisions should not force U.S. companies into a competitive disadvantage. American businesses must have confidence that major tax changes will not be made repeatedly.

The tax laws of foreign countries should be analyzed to determine if they discriminate against U.S. products being sold there. Discriminatory effects should be alleviated through negotiation or, if necessary, compensated through legislation.

BARRIER: POOR INTEGRATION OF MANUFACTURING, DESIGN, AND R&D MARKETING FUNCTIONS

All managers should have a grounding in the basic production process of the company. Beyond this, managers should receive cross-functional training so they have at least a minimal appreciation of finance, personnel, technology development, marketing, as well as production.

Top management must foster attitudes throughout management staff that foster flexibility, change, innovation and adaptability.

Business schools must update curricula to train business students in the total process -- from R&D to marketing and servicing. Business students must see any particular specialization within the fullest context of what is required for corporations to achieve maximum productivity.

BARRIER: INTELLECTUAL PROPERTY PROTECTION

Industrial firms in the U.S should take great care in transferring their technology and other intellectual property to foreign firms. For protecting the competitiveness of the nation as a whole, firms should establish safeguards against non-economic transfers.

Export control procedures should be changed to include intellectual property protection agreements and concerns, so that sales by U.S. firms are protected and enhanced.

Insist other nations protect U.S-owned intellectual property. Treaties, reciprocal agreements, tariffs, and other mechanisms used by the U.S. government in dealing with other nations should incorporate strong intellectual property provisions. U.S. laws could be strengthened to insure reciprocity and to prevent unapproved imports of products made abroad by processes patented in the U.S. Enforcement in other countries is often the weakest link in the protection process.

Ownership of rights stemming from collaborative research should be clarified. The goal is to eliminate uncertainty and thus maximize the incentives to rapidly commercialize technological developments by U.S. firms. Similarly, actions should be taken to assure that ownership rights and other benefits from Federally-funded research flow to U.S. organizations.

Ways should be sought to obtain payments from foreign graduate students for the intellectual property they benefit from while doing research in the U.S.

BARRIER: COMPLACENCY AND DEPENDENCE ON THE DOMESTIC MARKET

We must foster entrepreneurial risk-taking. Several steps can be taken. Promote greater ownership by executives of corporate stock so that executives become owners, not simply managers. Include employees in "participative management" so that more decisions are made by those closest to production operations. Incentive systems must be improved so that more employees feel they have a greater stake in the success of the company.

Shift emphasis in our business schools so that executive responsibilities are taught more within the context of "owners" responsibilities rather than "management" responsibilities.

We must promote a greater sense of the "common good" so that government, management and labor interact on a basis of achieving positive goals rather than on the historic adversarial basis.

We must foster the awareness that there is no longer anything such as a purely "domestic" market. What we think of as the U.S. domestic market is, in fact, part of the global market. Thus as soon as a product leaves the shipping dock, it has hit the world market, even if it is only being shipped across town. This perspective must permeate all management levels.

BARRIER: RESTRICTIVE TRADE POLICIES IN FOREIGN MARKETS

Adaptability to foreign preferences should be improved by U.S. firms. The result should be U.S.-made products that better meet the special preferences of consumers in other nations and better performance in the marketing/distribution systems overseas. Increased exports and reduced trade deficits are the obvious goal.

Foreign languages should be introduced earlier into the U.S. educational process, so that our citizens will have a greater ability to understand foreign needs/preferences, and have an increased ability to successfully do business overseas.

BARRIER: FEDERAL AND STATE REGULATIONS FOR PROTECTION OF HEALTH AND SAFETY

Wherever possible, domestic regulations (from such sources as EPA, OSHA, FDA, and SEC) should be reduced and simplified in order to minimize their negative effects on industry's use of new technology. In some cases, foreign competitors have an advantage of less stringent or loosely enforced regulations.

A better balance should be achieved between the desirable safety goals of domestic regulations and the economic costs to U.S. manufacturers and businesses. In addition to the added costs, firms often have the application of new technology or marketing of new products delayed significantly. In the current global economy, we should recognize that economic viability is as important a national goal as public safety. The key is to balance these goals in a meaningful way.

BARRIER: EXPORT CONTROLS ON ADVANCED TECHNOLOGIES AND HIGH-TECHNOLOGY PRODUCTS

The January 1987 President's Competitiveness Initiative directs the Cabinet to review the export controls program and provide recommendations to achieve the following:

- Decontrolling those technologies that offer no serious threat to U.S. security;
- Strengthening enforcement controls on those technologies that could harm U.S. security;
- Eliminating unilateral controls in those areas where there is widespread foreign availability;
- Reducing the time required to acquire a license by at least one-third and implementing a fair, equitable, and timely dispute resolution process;
- Seeking agreement with our allies for concrete actions to be taken which will make export control procedures more uniform and enforcement more rigorous;
- Seeking overall to level the competitive playing field while strengthening multinational controls over products and technologies that can contribute to Soviet military capabilities; and
- Recognizing the continued improvement in U.S./People's Republic of China (PRC) relations and the commitment of the PRC to protect sensitive technology, and working with our allies to further liberalize high technology trade with China.

BARRIER: RESTRAINTS AND UNCERTAINTY CAUSED BY PRODUCT LIABILITY LAWS

The January 1987 President's Competitiveness Initiative proposes several methods to overcome this barrier. Proposed legislation would:

- Retain a fault-based standard of liability;

- Eliminate joint and several liability except in cases where defendants have acted in concert;
- Limit noneconomic damages to a fair and reasonable amount;
- Provide for periodic, instead of lump sum, payments of damages for future medical care or lost income;
- Reduce awards in cases where a plaintiff also is compensated by other sources, such as government benefits;
- Reduce transaction costs by limiting attorneys' contingent fees to reasonable amounts on a sliding scale; and
- Encourage litigants to resolve more cases out of court.

BARRIER: ANTI-TRUST RESTRICTION AGAINST COOPERATIVE VENTURES

The January 1987 President's Competitiveness Initiative proposes several methods to overcome this barrier. The statutory proposals include:

- Amending Section 7 of the Clayton Act to distinguish more clearly between pro-competitive mergers and mergers that would create a significant probability of increased prices to consumers;
- Limiting private and Government antitrust actions to actual (rather than treble) damages, except for damages caused by overcharges or underpayments;
- Removing unwarranted and cumbersome restrictions on interlocking directorates;
- Clarifying the application of U.S. antitrust laws in private cases involving international trade; and
- Requiring that any antitrust claims remaining against other defendants after a partial settlement in a case be appropriately reduced.